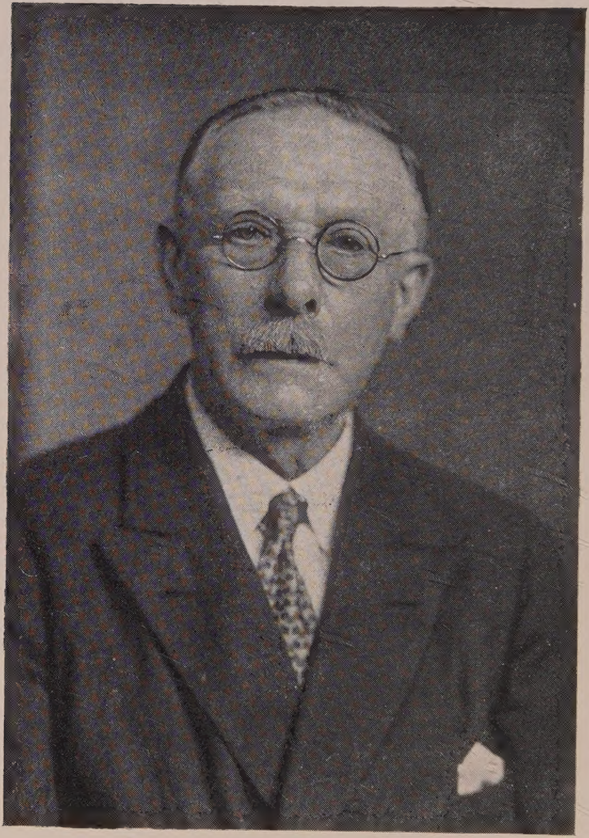

PROFESSOR A. C. DICKIE, A.R.I.B.A.

PALESTINE EXPLORATION QUARTERLY

Embodying the *Quarterly Statement* of the Palestine Exploration Fund and the *Bulletin* of the British School of Archaeology in Jerusalem

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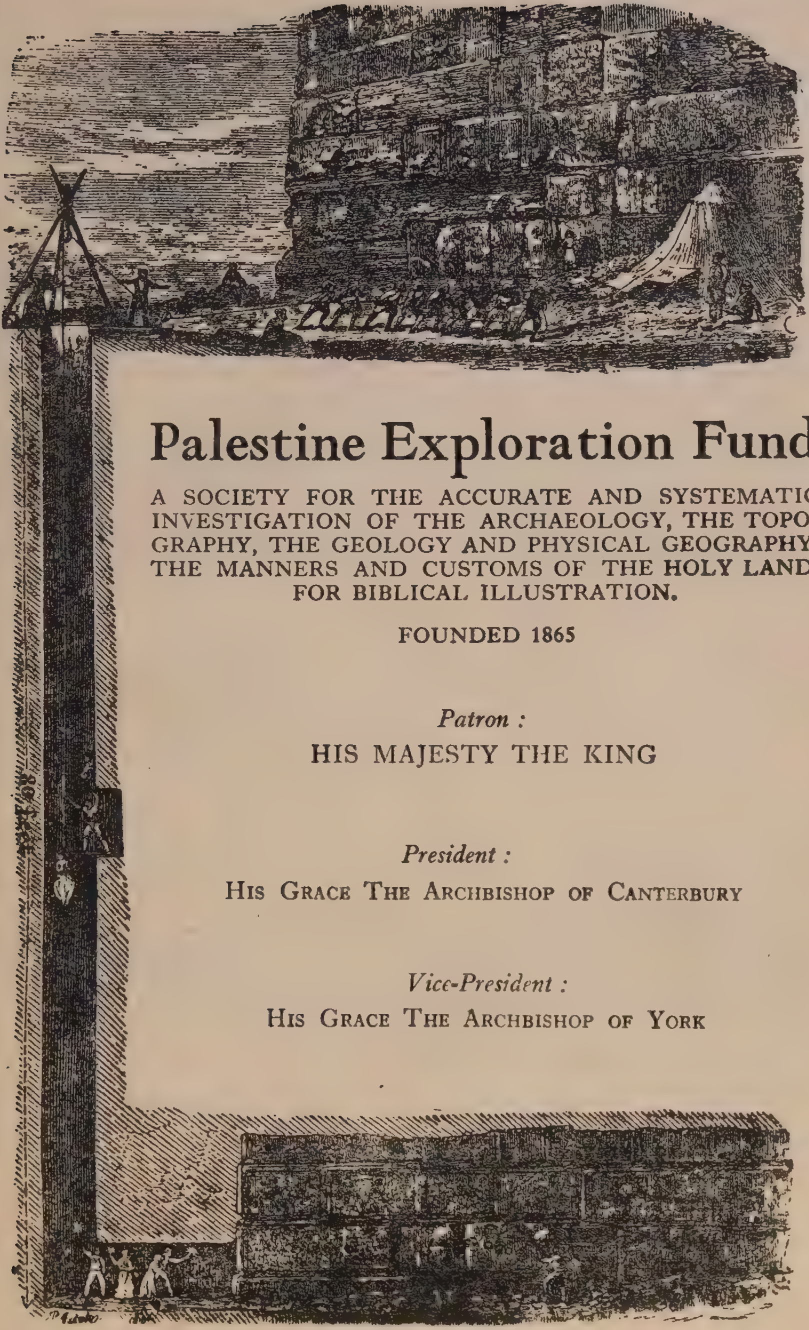

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PALESTINE EXPLORATION FUND
NOTES AND NEWS

THE PALESTINE EXPLORATION QUARTERLY. The question referred to in our last issue as being under consideration by the Executive Committee has been decided in the affirmative, and for the duration of the war the *Quarterly* will appear twice a year. The double number for January and April will appear in April, and that for July and October in October. The size of the numbers will, of course, be increased, while a considerable saving in expense will be effected.

The Editor wishes again to express his sincere thanks to those contributors who have given so generously of their time in these difficult days, and by their valuable contributions have made it possible for the *Quarterly* to maintain its continued existence without declining, it is hoped, from the high standard of its contents in the pre-war years which now seem so remote. At the same time the Editor would venture to appeal to those friends in the United States of America, now indeed united with us in the great final struggle of the world's destiny, who, we know, continue to read this journal with kindly interest, for some help in the matter of contributions to the *Quarterly*, a help which they are so well equipped in scholarship to give. Such help will be deeply appreciated as a gesture of solidarity.

In this connection we may refer to the recent appearance of a couple of books by two eminent American scholars, books of great importance to students of archaeology and of the Old Testament. One is entitled *From the Stone Age to Christianity*, Monotheism and the Historical Process (Johns Hopkins Press), and is by that indefatigable and encyclopaedic scholar Professor William Foxwell Albright. The other is entitled *What Mean These Stones* (American Schools of Oriental Research), and is by a well-known archaeologist and Old Testament scholar, Professor Millar Burrows, one of whose earlier publications has been reviewed in this journal. We hope to publish reviews of both these important books shortly. The *Quarterly* has received from the American Schools of Oriental Research a publication brought out in honour of Professor Albright's fiftieth birthday. It is an indexed bibliography of Professor Albright's writings, prepared by his former students. The list contains 473 items, covering an extremely wide and varied field of scholarship, and any man who, by the time he has reached the age of fifty, can show such a record of achievement, is surely not open to the charge of having hid his talent in a napkin, and deserves the warm congratulations of his British contemporaries together with the sincere thanks of all students of the Old Testament.

In the *Jewish Quarterly Review*, Dr Zeitlin, whose discussion and re-examination of the trial of Jesus was referred to in the last issue of the *Quarterly*, continues his study of the subject in the October issue of the *Review*, and discusses the various trials described in the book of Acts. The author draws an interesting contrast between the trial of Peter before what is described as a *state* Sanhedrin, and the trial of Stephen before the regularly constituted religious Sanhedrin which was in daily session. It is contended that the trials of both Jesus and Peter were for political offences, and were therefore conducted by a Sanhedrin specially summoned for that purpose, and designated by the author a *state* Sanhedrin, which may be said to be equivalent to a Sanhedrin sitting in a civil capacity. But the charge against Stephen was of a religious nature and was therefore dealt with by the regular Sanhedrin which was competent to try religious offences. Dr. Zeitlin is continuing the discussion in a subsequent issue of the *Review*.

In spite of the troublous state of the world, Palestinian archaeology is not quite dead. In the *Quarterly of the Department of Archaeology in Palestine*, X, I (1940), Mr. R. W. Hamilton reports on excavations against the North Wall of Jerusalem, 1937–8. Three soundings in the area of the North Wall revealed interesting facts. Sounding A, at the west tower of the Damascus Gate, showed two building periods up to the beginning of the fourth century A.D. This evidence was confirmed by sounding B, to the east of Herod's Gate, where further evidence appeared of a reconstruction of the wall in the sixth or seventh century A.D. Sounding C, to the west of Herod's Gate, while revealing two lines of fortifications at this point, gave no evidence of a wall which could have belonged to any city earlier than Aelia Capitolina. In 1940, discoveries during the making of a new road led the late Professor Fisher and E. L. Sukenik to excavate in the area of the eastern end of the Third Wall, with the result that the total explored length of the Agrippan Wall has been extended by nearly half a mile. In this connection it may be remarked that we hope to publish in our next issue an article by the Rev. William Ross on *The Four North Walls of Jerusalem*.

Since the appearance of our last issue American and Palestinian archaeology have suffered the loss of a scholar who was a pioneer in the modern methods of field archaeology. The name of Professor Clarence S. Fisher is associated with that of George Reisner in the beginning of the scientific excavation of Samaria in 1909. His services to the cause of Palestinian archaeology have been long and distinguished, since his appointment in 1925 as Professor of Archaeology on the staff of the American School of Oriental Research in Jerusalem. His *Corpus of Palestinian Pottery*, three volumes of which have already appeared, is an indispensable handbook for students of Palestinian archaeology. He was greatly beloved in Jerusalem for his quiet, unostentatious generosity and his unfailing sympathy for the cause of the poor and oppressed.

In his now well-known capacity of dragon-slayer, Professor Albright has again attacked and destroyed another of the alleged parallels between the Ras Shamra texts and the Old Testament. This time it is the supposed occurrence of the words *teraphim* and *ephod* in that very difficult passage of the texts in I*AB, i, 1–21. Professor Albright acknowledges that his rendering of the passage varies considerably from previous renderings, and adds that these variations are not to be construed as criticisms. He continues " In this rapidly advancing field it is no disgrace to make unavoidable mistakes —it is rather a shame to make no effort to progress beyond one's predecessors." After his new translation of the passage, which is a brilliant piece of philological interpretation, he concludes, " We have eliminated the ephod and the teraphim from this passage, it is true, but we have perhaps thrown some light on the prehistory of these Hebrew cultic terms. Moreover, we have pointed out a number of hitherto unrecognized parallels to biblical language and symbolism. As research proceeds, the importance of Ras Shamrah studies for biblical literature will become more and more evident. But every new analogy enhances our respect for the quality of the sacred poetry of Israel, which inherited the best of Canaanite literary art and poetic imagery, but used it in the construction of an edifice which surpassed it immeasurably, from the literary point of view alone." The interesting article from which we have quoted is contained in the BASOR, No. 83, October, 1941.

The Committee have to acknowledge with much pleasure and gratitude from the American Schools of Oriental Research, through their President, Professor Millar Burrows, the generous gift of fifty dollars to mark their appreciation of what they very kindly call " our efforts in the face of considerable difficulty." This graceful gesture is extremely encouraging, and will be recognized with pleasure by all our British readers and supporters. May we venture to express the hope that it will stir these up to a remembrance of the fact that the Fund is passing through very difficult times financially. The donors of this welcome gift indicated that it was made possible by the generosity of Professor Elihu Grant whose eminent services to archaeology are well-known to all. This cheering incident is a reminder that we are indeed united now in the fight for all those precious things which are our common birthright.

In the issue of the *Times* for March 3rd the death was announced of The Very Reverend Sir George Adam Smith, the veteran archaeologist and divine, whose name has been associated with the Palestine Exploration Fund for many years. An account of his life and work will appear in the October issue of this journal.

PROFESSOR A. C. DICKIE, A.R.I.B.A.

THE FUND has lost one of its most distinguished members in Prof. A. C. Dickie, who died in a London hospital on Sept. 3rd, 1941.

Archibald Campbell Dickie was born at Dundee in 1868; he was educated privately and trained at the Architectural Association School in London. He was appointed Architect to the P.E.F. Expedition at Jerusalem in 1894, and worked with the late Dr. F. J. Bliss at the excavations there until June, 1897, and it was while returning from the work one evening with Dr. Bliss, that they were attacked by ruffians, and Mr Dickie was stabbed and had his right arm broken. He was an ideal colleague, incorrigibly cheerful and equable in temper amid all the difficulties of archaeological work in Palestine, where political tension and the nervous suspicions of the Turkish Government, both local and at Constantinople, complicated and often thwarted work. Dr. Bliss paid him a well-deserved tribute in the Introduction to "Excavations at Jerusalem" (1898): "While the main task of writing the letterpress has fallen to me, yet the form taken by many of the sentences would have been very different, had Mr. Dickie not been associated in the excavations. Not only have I been indebted to him for technical details, but most of the details regarding the relations of the various discoveries have resulted from discussions carefully thrashed out between us. In laying out new work we always went over the ground together, and in the superintendence thereof the responsibility was shared..... This close association begun in the shafts and tunnels at Jerusalem has continued here in London, where we have worked side by side in the preparation of the memoir." The plans and illustrations in this fascinating book were Mr. Dickie's work. He also contributed many articles on archaeological and architectural subjects to the "Q.S." the Bible Encyclopaedia, and kindred publications.

Mr. Dickie made full use of every spare hour in Palestine. He studied many of the old churches in Palestine, the result of his work being embodied in an illustrated pamphlet, "Early Christian Churches in Palestine." He also made a detailed examination of the Great Mosque at Damascus (1897). Damascus was a hotbed of Moslem fanaticism, but his genial and friendly approach overcame the suspicions of the guardians of the Mosque, and they parted from him on the best of terms. Like most people who have lived there, he left a large bit of his heart in Palestine, and writing from Manchester University in December 1913, to an old friend in Jerusalem, he said, " You will, ere this, have settled down again in Jerusalem; the thought of it makes me wish I was a digger again."

On his return from Palestine he married Miss Mary Reich, a Scottish lady whom he had known from childhood. He practised in London (1898–1912), and was Master in Design at the Architectural Association School, London (1910-12). His interest in the Fund's work never lessened, in spite of other claims upon his time; he became a member of the Executive Committee in 1906, and when Mr. George Armstrong died in 1910, he succeeded him as Assistant Secretary; during his two years at the London Office he completed the Index to the " Q.S." for 1893-1910, begun by Mr. Armstrong. In 1911, the late Mr. Walter Morrison expressed his desire to endow the Fund with a house of its own, and, as a professional architect, Mr. Dickie's services were immediately available in the search for a suitable building, and its adaptation for the use of the Fund. Later, in 1933, when it became necessary to add further accommodation to the premises, he entirely approved of the work done. In 1912, he was appointed Professor of Architecture at Manchester University, a post he held for 21 years; he was Professor Emeritus from 1933 until his death. During the Great War he was one of those members of the P.E.F. Executive Committee who did valuable work for a branch of the Naval Intelligence Department. His last visit to the London Office was in 1936, when he gave a most interesting lecture on " The Jews as Builders." When he left Manchester, he settled in Buckinghamshire, in a house designed and built by himself. Mrs. Dickie and a daughter survive him.

Mr. Dickie's death has brought a deep sense of loss to many; his charm of manner, his humour, kindness and friendliness, his unfailing sweetness of temper, turned casual associates into friends, and friends, once made, were never forgotten.

E.M.E.B

AN ARCHAEOLOGICAL SURVEY OF THE PLAIN OF JABBUL, 1939

By R. Maxwell Hyslop, J. du Plat Taylor,
M. V. Seton Williams, J. D'A. Waechter

> " We are dead, but our living was great : we are dumb, but a song of our State
> Will roam in the desert and wait, with its burden of long, long ago,
> Till a scholar from sea-bright lands unearths from the years and the sands
> Some image with beautiful hands, and knows what we want him to know."
>
> J. E. Flecker.

When we emerge from the twilight of prehistory with its numerous well-known cultures but nameless cities, to the half-light of the early historical period, we almost seem to have exchanged order for chaos. For the area around Aleppo was continually changing hands ; it was one of those borderlands, important mainly as a trade route, through which passed the mineral ores of Cilicia to the great riverine empires.

The early history of the area lying to the east and south-east of Aleppo in the third millennium is singularly obscure at present. There are few historical references to it in extant texts and therefore it must be considered in the light of our knowledge of the early Sumerian and Akkadian periods in Babylonia. Some facts can be briefly summarized and certain other possibilities discussed. Aleppo must have been an important meeting place for trade routes from the east along the Euphrates valley, from Homs and Hama to the south, and from Cilicia to the north-west ; and when the wealth of the tombs at Ur is considered, it seems likely that these routes must have been used to a certain extent early in the third millennium. The silver in the Royal Tombs most probably came from northern Cilicia (Bulgar Maden) and one of the sources of the gold was probably the gold-bearing rivers, Jeyhan and Seyhan, in Cilicia.

How far this area was affected by the march of Lugalzaggisi of Erech along the Euphrates to the Mediterranean it is impossible to say ; but it is conceivable that it became part of the dominions of Sargon of Agade after his expedition to Syria, the Mediterranean coast and Cappadocia. It may also have been involved in Nur-Dagan's resistance to Sargon in north Syria, when the Akkadian ruler responded to the appeal of merchants from Asia Minor who must have been concerned in the silver and wool trade.

In Gudea's time we know that trade flourished in the same way as it had in the reigns of Sargon and Naram-Sin. Gudea obtained gold from Cilicia, and cedar from the Amanus; and Aleppo must have played its part in this commercial activity.

Thus it is to be expected that by the time of the third dynasty of Ur this region cannot have been unaffected by the spread of Sumerian civilization along the trade routes. The importance of Sumerian influence is exemplified by the remarkable unity of west Asia at this period, which is evident where commerce, legal practice, art, or even dress are concerned, and it is especially important to note that any area concerned in trade must have been considerably influenced by the standardization of commercial intercourse. There is no direct evidence that the Jabbul plain, although it must have enjoyed the prosperity induced by the flourishing trade, was ever politically subject to the third dynasty of Ur, but the Sumerian kings must have had complete control over the caravan routes. The Cappadocian documents afford valuable evidence regarding the districts through which the caravans passed. Barga is located south of Aleppo, and was an important centre for the caravan trade with Asia Minor, and Urshu is almost certainly somewhere just south of the Gulf of Alexandretta.

The subsequent history of the Aleppo area in the second millennium B.C., must to a great extent depend on the policy of whatever power controlled the trade with north Syria and Asia Minor. In the early years of the second millennium, Sargon of Assyria must have controlled this route from Ashur to Caesarea; but later Assyrian communications along the Euphrates were being constantly plundered by bands of marauding peoples moving northwards; and in the early eighteenth century, as we learn from a letter, the plain of Aleppo had been invaded by a wandering tribe, the Rabbaya.[1] Also the northward movement of the Ḫabiru may well have affected the area.

Shamshi-Adad's victorious march to the Mediterranean, shortly before 1790 B.C., however, restored Assyria's control over the trade routes and it would be difficult for the Assyrian king to execute this expedition without establishing some sort of overlordship over the territory through which he marched.

At this point, the history of this region becomes clearer: Aleppo itself must have become the capital of the kingdom of Yamkhad, within whose borders lay the small state of Mukish with its capital at Alalakh.

From the evidence afforded by cylinder seals, it seems that Egypt dominated Syria during the XIIth dynasty; and an unpublished seal from Level VII at Alalakh, with the name of Samshu-Adad, " Servant of Yarim-Lim, King of Yamkhad " (elsewhere called the king's brother) is evidence that Egyptian rule extended as far north as Yamkhad.[2] This rule lasted until the time of Amenemhat III, shortly before Shamshi-Adad's Syrian expedition.

On the collapse of Egyptian power, Yarim-Lim became king of Yamkhad, and it is possible that the plain of Jabbul was included in his dominion. That he exerted considerable political influence is clear from the fact that he was an ally of Ḫammurabi of Babylon, and Zimri-Lim, King of Ma'er. In a letter addressed to Zimri-Lim we read that " twenty kings follow Yarim-Lim of Yamkhad."[3] His successor, Ḫammurabi of Yamkhad, certainly played his part in the continual struggle of the Amorite dynasties among themselves. He sent troops to help Ḫammurabi of Babylon against Rim-Sin and then helped Ishme-Dagan of Assyria against Ma'er. Yet this

[1] Sidney Smith. *Alalakh and Chronology*, p. 34, note 95.

[2] Sidney Smith. *Op. cit.*, p. 13.

[3] Dossin. *Syria*, XIX, pp. 117-8.

period was distinguished by considerable trade, and as shown by the Ma'er archives the routes were kept open, possibly owing to their dominion by Ḫammurabi of Babylon.

There is less evidence about the period after the latter's death, c. 1750 B.C. Yet important developments took place in Syria. The Hyksos were established in north Egypt by 1720, but the previous extent of their power in Syria is unknown. Their well-known superiority in armaments must have been based on their command of the supplies of bronze, and this would therefore imply a certain degree of control over the parts of north Syria through which this trade passed. It is clear, however, that Aleppo managed to retain its importance till its capture by Mursilis I.

Between 1700 and 1600 B.C., the city still possessed the "great kingship" mentioned in a later treaty and may still have been the capital of the kingdom of Yamkhad. But the Hittites had begun to press southwards, and a Bogazköy text relates how Hattusilis I attacked the territory of Aleppo and was opposed by the Princes of both Carchemish and Aleppo.[1] His successor, Mursilis I, sacked Aleppo and Babylon, c. 1595 B.C. "He went to Ḫalpa (Aleppo) and destroyed Ḫalpa and brought prisoners from Ḫalpa and their possessions to Ḫattushash. Thereafter he went to Babylon and destroyed Babylon, attacked also the Ḫurri and kept the prisoners and possessions from Babylon at Ḫattushash."[2] Prof. Sidney Smith has suggested that the object of the raid was to smash the Amorite power in Syria; Babylon, which was still trying to retain power in Syria, was therefore attacked as an ally of Aleppo. Thus the raid of Mursilis I was undertaken to break up the Babylonian hegemony. Having achieved this purpose he returned to Asia Minor, not even remaining to impose his rule on the Aleppo region.

Some years later the Hyksos were expelled from Egypt, and the repercussions of this event cannot have failed to affect the Aleppo area. Owing to pressure from the south important movements of the Aramaean tribes took place, resulting in a confused state of affairs in Syria. The Aḫlamu were forced northwards into the north Syrian desert, mainly between Aleppo and 'Anah, and the dominance of the Aramaeans along the caravan routes hardly created favourable conditions for international trade.

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[1] *Keilschrifttexte aus Boghazköy, I,* No. 11. Trans. by Güterbock in *Zeitschrift für Assyriologie* (NF), X, p. 115 ff.

[2] Hrozný. *Hethitische Texte,* pp. 102–105.

The Egyptian policy from the middle of the sixteenth century onwards must now be considered. The XVIIIth dynasty Pharaohs soon began to take a renewed interest in Palestine and Syria. Amenhetep I is believed to have reached the Euphrates and soon after 1527 B.C. Thothmes I marched up the Orontes valley and on to the Euphrates; there is evidence from Egyptian texts that he hunted elephants in the land of Niy, which lay almost due east of Aleppo.[1] His opponent in Naharina, to whom he refers in derogatory terms, may have been the king of Mitanni which probably was the leading power among the Ḫurri states at that time. The power of Mitanni at any rate was rapidly developing, and the Aleppo area undoubtedly acknowledged it as suzerain. The obscure references in Hittite texts to campaigns against Aleppo may have taken place during this period, as it is probable that any attack on Aleppo must have preceded the Egyptian domination.[2]

After the battle of Megiddo, however, Mitanni was attacked and defeated by Egypt and the individual Syrian states were systematically reduced. Alalakh paid tribute to Thothmes III and the Aleppo area must have followed suit.

The Egyptian domination of north Syria lasted till shortly before Thothmes III's death, c.1461 B.C. Trade flourished and presumably the Aleppo area enjoyed renewed prosperity. The importance of Aleppo itself at this time is increasingly evident, as it was the centre of a revolt which, though it was quelled by Amenhetep II, ultimately resulted in the expulsion of the Egyptians from Syria. Aleppo may have been allied with the Hittites at this time, although the alliance cannot have lasted long after the expulsion of the Egyptians. From the preamble of a treaty we learn that the king of Aleppo "turned away from" the Hittite king Dudhalias II and "associated himself" with the king of Ḫanigalbat; in other words Aleppo acknowledged the suzerainty of this state.[3]

[1] S. Yeivin. *Journal of the Palestine Oriental Society*, XIV, pp. 218–25.

[2] Sidney Smith. *Early History of Assyria*, p. 388, note 2.

[3] *Keilschriftexte aus Boghazköy*, I, No. 6. Translations in Weidner, *Politische Dokumente aus Kleinasien*, p. 80 ff.

This arrangement, however, was short-lived, as Mitanni, recovering from Thothmes III's victory, regained its power in north Syria. Aleppo transferred its allegiance, and in a dispute over a boundary question between Aleppo and Ashtata which lay on the southern banks of the Euphrates, Saushshatar was asked to act as arbiter. In the succeeding period Aleppo must have enjoyed comparatively peaceful conditions. Owing to Mitanni's policy of friendship with Egypt, Artatama I made peace with Egypt after a short war with Thothmes IV, and his son Shutarna II continued his policy.

In the reign of Dushratta of Mitanni this state of affairs was changed. The Hittite strength was assuming formidable proportions and towards the end of Amenhetep III's reign Dushratta challenged Shubbiluliu, who had interfered by supporting Dushratta's rebel brother. Shubbiluliu promptly led a raid into Naharina, claiming Lebanon as his southern boundary. Then, c.1370 B.C., in a successful campaign, he marched and sacked the capital of Mitanni, conquered Aleppo and Mukish, staying for a time in Mukish. His camp near Aleppo was the scene of some "fifth-column" activity, as Tarkua, King of Niy, came to make terms with Shubbiluliu, while his brother and other Ḫurri nobles prepared to resist the invader. Unsupported, they failed and were carried off into captivity. Thus the Aleppo area passed into the hands of the Hittites whose supremacy in north Syria was finally established after Shubbiluliu's second campaign, c. 1360–1355 B.C. In the reorganization of north Syria undertaken by Shubbululiu, one of his sons, the priest Telibinus, was sent to rule the kingdom of Aleppo.

Hittite domination of the Aleppo area continued during the succeeding period when the growth of the power of Assyria was taking place ; Adad-Nirari I advanced as far west as Carchemish. Mursilis II appointed Rimi-shar, King of Aleppo, and while Seti I was campaigning in Palestine, the Hittite king set about maintaining Hittite supremacy in north Syria. That he was successful is shown by the fact that when his son, Muwatallis, was preparing to meet Rameses II at Kadesh, he was able to call on the help of an imposing army of Syrian princes, including those of Ugarit, Aleppo and Carchemish. Rameses tried again to dislodge the Hittites from north Syria by marching up the Orontes valley, but the attempt failed: Aleppo among other Syrian states was forced to renew its treaty of allegiance to Muwatallis. After the peace treaty between Rameses and Hattusilis in 1273 B.C. the Hittites must have remained the leading power in north Syria throughout the reign of Shalmaneser I of Assyria until they collapsed before the "völkwanderung," c. 1200 B.C. The land round Aleppo must have remained in their hands until their disintegration, when a state of complete confusion reigned, possibly for over two hundred years. In the early first millennium, however, after the period of direct invasion by incoming hordes had ceased, the tribes settled down, and independent states under Aramaean leadership grew up. Damascus and Aleppo became important Aramaean centres which must have enjoyed considerable commercial prosperity. The exclusion of Assyria from this trade resulted in the efforts of successive Assyrian emperors to advance their dominions westward, and in the ninth century Shalmaneser III, when conducting a campaign against Hamath, Damascus and twelve other monarchies, captured Aleppo and Til Barsip. North Syria was then reduced to absolute obedience and Assyria took control of the caravan routes. Although Aleppo was probably involved in the attempt of Barhadad of Damascus to restore the Aramaean power, Adad-Nirari III of Assyria crushed the revolt in 802 B.C. After a short period of weakness, Assyrian domination in north Syria was re-established by Tiglath-Pileser III; a further attempt by the Aramaean states to rebel in Sargon's reign failed completely, and by 720 B.C. Aleppo was included in the solid block of Assyrian provinces stretching across Syria to the Mediterranean. Finally, at the break up of the Assyrian empire, Aleppo passed into the hands of the Neo-Babylonian empire and its subsequent history needs no elaboration.

IDENTIFIED HISTORICAL SITES IN THE NEIGHBOURHOOD

The only towns of historical importance in this neighbourhood which can be identified with any certainty are Tell

Botan (Bathnae), Membij (Bambyce or Hieropolis) and Aleppo (Beroea).

Tell Botan is a large high mound on the northern outskirts of Bab. According to Ammianus Marcellinus, " the town of Bathnae, founded as Anthumesia in early times by a band of Macedonians, is separated by a short space from the river Euphrates ; it is filled with wealthy traders when at the yearly festival near to the beginning of the month of September a great crowd of every condition gather at the fair to traffic in the wares sent from India and China, and the other articles brought there in great abundance by land and sea."[1] It was evidently a market town on the caravan route.

Xenophon says, " here stood the palace of Belisys, the ruler of Syria, with its park which was very large and beautiful, and full of all the products of the season in their courses."[2]

Cyrus, unfortunately, cut down the park and burnt the palace, so that by the time of Procopius,[3] Bathnae had become a small stronghold of no importance.

Gertrude Bell visited the site in 1909,[4] and picked up some coins of Valerian. There is, however, evidence that the site was inhabited earlier than the Hellenistic times, its size alone precluding such an origin. It probably dates back to the Sargonid period or earlier, for the small spring which rises near its foot and flows through the surrounding gardens still makes it a pleasant place to pause at.

Membij, better known perhaps as Hieropolis, or Bambyce, situated near the Euphrates about eighty kilometres north-east of Aleppo, and known in Assyrian times as Mabbog or Mappigu, was also an important town on the Hellenistic-Roman trade route ; and the centre of the cult of Hadad and Atargates.[5] The walls have been robbed for stone, and the major portion of the town is hidden under the modern village (Pl. I, Fig. 1). There are many fewer extant remains than when Ainsworth visited the site in 1835.[6]

[1] *Ammianus Marcellinus*, XIV, 3, 3.

[2] *Xenophon*, IV, 8–11.

[3] *Procopius of Caesarea, Wars*, II, 12, 31.

[4] G. Bell, *Amurath to Amurath*, p. 18.

[5] *Strabo*, XVI, 1, 27.

[6] Ainsworth, *The Euphrates Expedition*, Vol. I, p. 239.

On this site was unearthed a monument to the Perpetual Peace of A.D. 532, but the exact location of the find is unknown. It was visited by Justinian who reconstructed the walls,[1] later it was one of the frontier fortresses of Haroun-ar-Raschid. It was finally sacked by Hulaku in A.D. 1259, and never recovered.[2]

Til Barsip (Tell Ahmar),[3] the capital of Bit Adini which included Mappigu in its territories, lies on the east bank of the Euphrates ; it is one of the few sites in this neighbourhood besides Carchemish which have recently been excavated. Unfortunately, owing to the war, we have not been able to compare this material with ours : it appears that the site was occupied from the prehistoric (Tell Halaf) to the Islamic period.[4]

The Carchemish material showed on the whole little connection with our area except for the early Halaf wares[5] from the Yunus kilns.

Neirab was partially excavated by the *Ecole Archéologique Française de Jerusalem* during 1926–7.[6] The work began at the point where an Aramaean inscription had been found in 1891.

A large cemetery of the Neo-Babylonian period was found on the top of the tell, but the lower levels appeared to have been extensively robbed. Many inscribed tablets were found.[7]

Eske Meskene or Balis, about two kilometers from the Euphrates, may be identified with the Barballissus of Ptolemy, although Benjamin of Tudela considers it was the Biblical Pthora, and thought that the octagonal tower, which still stands as the most noticeable feature of the site, was that of Balaam.[1]

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[1] *Procopius, Buildings*, II, 12–19.

[2] Hogarth visited the site in 1908, and records a number of inscriptions. From his description the site does not seem to have changed greatly, but the robbing has been extensive. *B.S.A.*, XIV, p. 183. Hieropolis Syriae.

[3] F. Thureau Dangin & Maurice Dunand. *Til Barsip. Haute Commissaire de la République Française en Syrie et en Liban. Bibl. Arch. et Hist.*, XXIII, 1936.

[4] It is possible that the rope pattern pottery picked up by Gertrude Bell on this site may have affinities with the Beske ware (see p. 22), though perhaps it belongs to the later Islamic period of which so many examples occur at Eske Meskene.

[5] *Iraq*, I, Pl. II, p. 152.

[6] *Syria*, VIII, p. 125, IX, p. 187.

[7] *Ibid*, VIII, p. 213.

The minaret is, of course, Arab, and there are considerable traces of the Arab town superimposed on the earlier Roman. The town, whose mounds extend over several acres, was excavated by a French expedition under MM. de Lorey and Salles during the years 1927–30,[2] but the results have not been fully published. They cleared the mosque which appeared to be of similar type to that of the Omayyads in Damascus. M. Cavro[3] records the find of a small plaque of the archaic Sumerian period.

Kalat-en-Nedjem, on the west bank of the Euphrates and the site of a ford from early times, was visited during the preliminary survey. The ford is now commanded by the Arab castle, a massive pile, the major portion of which is still standing (Pl. I, Fig. 2). Traces of an earlier settlement, Hellenistic and Roman, were to be found in the low mound of Tell Furn between the river and the modern village. It has been suggested that Caeciliana was situated at Kalat-en-Nedjem, but doubt is cast upon this identification by Dussaud who prefers to place it near the mouth of the Sadjur. The site was known as Jisr Membij, or Jisr Sadjur, by the Arabs in the Middle Ages, because of the bridge that gave direct access to the Hauran ; but no remains are now visible.[4]

A glance at the later history of the Aleppo region shows that it was mentioned by numerous authorities. Thus Ptolemy, Strabo and Xenophon have all left some account of the towns and inhabitants ; while the marches of Justinian are described by Procopius of Caesarea. Later, Isidore of Charax marks the stages down the Euphrates, and during the Middle Ages it was visited and described by Benjamin of Tudela and Ibn Battuta.

[1] *The Itinerary of Rabbi Benjamin of Tudela.* 1157-73. A. Asher, 1840.

[2] *Syria*, X, 1929, p. 370, XII, p. 112.

[3] *Syria*, XII, p. 112.

[4] R. Dussaud. *Topographie Historique de la Syrie Antique et Médiévale*, 1927, pp. 450–451.

During the last hundred years the area has been frequently crossed by travellers, most of whom left some written record of their adventures. One of the first of these was Buckhardt.[1] : he was followed by Chesney and Ainsworth of the Euphrates survey expedition, who confined their attention mainly to sites bordering the river.[2] The Blunts passed that way and skirted the northern shore of the Jabbul lake and mention the sites of Kzaf, and Balis.[3]

Just before the last war there were many travellers going through. Von Oppenheim, the American, Garrett,[4] Alois Musil, Hogarth, who visited Membij and the Carchemish neighbourhood in 1908,[5] and Gertrude Bell. Then, Sarre and Hertzfeld made an archaeological survey of the river valley.[6]

The expedition's interests being mainly in periods earlier than the classical, it seems unnecessary in this short report to enter into the controversies concerning the history and attributions of the ancient sites, of which much, from time to time, has been written.

We regret that owing to the war it has been found impossible to correlate fully the material discovered, or examine all the relevant publications.

THE SURVEY

In the spring of 1939, following a study of this data, a survey of the area east of Aleppo was carried out under the auspices of the British School of Archaeology in Jerusalem, and the Institute of Archaeology, University of London.

The success of the expedition was largely due to the courtesy and kindness of the *Service des Antiquités en Syrie et en Liban*, and particularly to M. G. Schlumberger, whose personal assistance was invaluable. Our thanks are also due to Mr. P. L. O. Guy of the British School in Jerusalem for the loan of tents and equipment ; to the Wellcome Marston Expedition of Tell-Duweir for the use of their Ford Pick-up ; to Prof. Sidney Smith, Mr. M. E. L. Mallowan, and Miss Parker, Miss Kenyon and Miss Tufnell, who examined and advised on the dating of the pottery. Miss T. Newbould assisted with the preparation of the text and Mr. G. MacKay drew the map. While in Aleppo, the expedition was fortunate in meeting Dr. R. E. M. Wheeler, the Director of the Institute of Archaeology ; it is due to his interest that we are able to make use of the Institute as a headquarters and store for our material.

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[1] Buckhart. *Travels in Syria and the Holy Land*, 1822.

[2] Chesney. *Expedition for the Survey of the Euphrates and Tigris*, 1868.

[3] Lady Blunt. *Bedouin Tribes of the Euphrates*, 1879, p. 83.

[4] Garrett, R. *Publications of an American Archaeological Expedition, Syria*, 1899–1900.

[5] L.A.A.A., II, 1909, p. 165 ff.

[6] Sarre & Hertzfeld. *Archaeologische Reise im Euphrat und Tigris Gebiet*, 1911.

In Syria, Aleppo was the expedition's headquarters ; and the country east of this town was explored with the aid of two trucks and an Arab driver (Pl. VI, Fig. 13). Particular attention was paid to the area enclosed by the triangle Membij, Meskene, Aleppo, and south to the shores of lake Jabbul.

A preliminary circuit via the above-named towns showed that the area could be divided into rocky foothills, intersected by wadi beds, the banks of which offered the only suitable sites for early settlement ; and a marshy plain surrounding the head of the salt lake, gradually becoming desert on its eastern confines. Tells were thickly grouped in the plain, along the banks of the Euphrates and on the caravan route to Membij.

The plain, then as now largely agricultural, slopes upwards to the foothills, intersected by wadis, some of which maintain their flow throughout the year. It is thickly covered with large and small beehive villages of mud-brick which are of a construction peculiar to that part of Syria. The domes of these houses, which are supported on a wooden frame, vary considerably in shape, from those that are a complete cone, to those whose roofs only are domed on a square base (Pl. I, Fig. 3.) Others are truncated cones.

Around the lake the inhabitants have retained their distinctive costumes, especially the horned head-dresses of the women.

The Roman caravan route passed through Bab and skirted the area on its northern side. Grant considers " that to reach

Aleppo, caravans had the choice of two routes. They could follow the river north-west of Meskene . . . or a more northerly route which was preferred in the pre-Roman period: it traversed the upper part of Mesopotamia, crossed the Euphrates at Zeugma or Tell Ahmar and passed to the north-west of Aleppo directly to Antioch via Membij."[1]

The Medieval route followed, sufficiently closely, the modern motor road to Meskene; while a southern branch passed through Sfira and south of the lake on the way to Palmyra.

The sites, 109 of which were examined, proved to be of various periods. Each site visited was photographed, notes were made of its topography, and surface sherds collected. From a study of these some idea of the periods represented in this area was obtained.

Most of the tells were eroded; others had exposed surfaces, due to cultivation, or deliberate excavation by the local inhabitants, in search of stone for building, or soil for fertilizing (Pl. V, Fig. 10). There were some, however, which were grass-grown mounds on which few material remains were visible; while others were impossible to examine closely owing to the presence of shrines or burial grounds.

The plotting of the tells was greatly simplified, for the majority of them had been used as triangulation points by the French survey and were already marked on the map. The maps used by the expedition were the 1 : 200,000, 1 : 250,000, and 1 : 500,000 *Cartes du Bureau Topographique de l'armée française du Levant*, and Kiepert's maps of Northern Syria embodying the routes of several famous travellers.

Unfortunately, the large scale French sheets did not extend over the whole area surveyed, but where the sites were not marked their position was plotted with the aid of a prismatic compass and theodolite. The position of sites between Meskene and Membij are only approximate, as the scale of the map of that area did not mark the physical features sufficiently clearly to plot the bearings. In regard to the transliteration of Arab names, an attempt has been made to follow the English, rather than the French form, so that the names of sites which appear on our map do not strictly conform to those of the French surveys.

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[1] C. P. Grant. *The Syrian Desert*, pp. 40, 41.

The tells visited fell naturally into several groups. Some were long, low mounds, of which the early sites, Jededieh-Jabbul (Pl. II, Fig. 4) and Sheikh Ahmed, are examples.

Those with later settlements as well, rose into high conical mounds, Abu Jabr Zrir ; others have steep sides and flat tops as Shirba (Pl. II, Figs. 5 and 6). A few of the conical sites were surrounded by a raised platform, the cone possibly denoting a citadel or a later occupation. Misan (Pl. IV, Fig. 9) and Radr are examples.

These were mainly small sites, but the next group of large walled cities spread over a considerable area, and often showed traces of walls and gateways. Sfira and Arane the largest of these, are much eroded and surrounded by modern villages. Sfira was partially excavated by M. Brossé in 1925–26, but the results have not been published (Pl. III, Fig. 7). Abu Zanne, Naam, Sabaine (Pl. IV, Fig. 8), and Umm el Mara may also be cited ; the latter is possibly a Roman town.

The Hellenistic and Roman village sites, not situated on earlier settlements, were of the open village type ; irregular mounds with traces of walls and banks. Khirbet Deir Hafir belongs to this group, and the small square mound of Tell Umm Adasseh might well be a Roman fort or camp.

The early Christian sites were not easily distinguishable on the plain, but on the road from Bab to Membij, many were noted on the preliminary tour. Qozdali Kbir and Adjmi bore traces of stone houses and buildings of a type familiar in the Orontes valley.

Few traces of construction were found on the tells, but here and there fragments of walls and basalt blocks were noted ; pieces of lava saddle querns were also found.

Architectural remains were very scarce ; on some of the Roman sites lintels and fragments of basalt columns were observed. Near Tell Aalam, about a hundred and fifty yards to the north, were the foundations of a structure in basalt, and beside it, a battered Roman altar, now used as a trough.

On the midden at Hmaime Zrir were a Byzantine lintel and door post (Pl. VI, Fig. 12) : the design is typical of those of the sixth and seventh centuries A.D., and many parallels are found in the region around Hama and the Orontes valley among the Byzantine cities.[1]

At Sheikh Ahmed was a fragment of basalt door belonging to the same period (Pl. V, Fig. 11); Lassus figures similar types at Tell Hazne and Tell Snan near Hama.[2]

Flints

These, though present in large numbers on some sites visited, yielded only a few worked tools of no distinctive date.

Figurines

A few fragments of terracotta animals and figures were picked up at Arane and Hmaime; the figures were of a coarse type with pointed cap, belonging to the Iron Age: and a moulded head with diadem, belonging probably to the Persian Period.

Sculpture

Few fragments of sculpture have been found in the neighbourhood, excluding those of Tell Ahmar (Til Barsip). The most noticeable are:

(1) The Sfira torso (Pl, VII, Fig. 14). This statue was found at Sfira, twenty-five kilometres south-east of Aleppo and is now in the Aleppo Museum. It is forty-two centimetres in height and the head and legs are missing. The arms are bent in front in an attitude of adoration and the right hand holds a cup. The upper half of the figure is dressed in a tight-fitting tunic made of some thin material. At the waist a wide belt decorated with two bands overlies a skirt made of a rippled fabric which is draped tightly round the figure. Examples of this fabric are known from reliefs at Malatia and Yasili Kaya, and shawls with rippled stripes are portrayed in the Theban tombs.[3]

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[1] J. Lassus. *Inventaire Archéologique de la Région au nord-est de Hama.* 1936. Figs. 61, 84.

[2] *Ibid*, p. 32, Fig. 33, Fig. 213, Pl. XLIII.

[3] *Contenau, Manuel d'Archéologie Orientale*, II, Figs. 131, 698. Mackay in *J.E.A.*, X, p. 41 ff. For the Habur district as an important centre of the weaving industry in Western Asia, cf. Sidney Smith, *Early History of Assyria*, p. 144.

Attached to the belt is a large dagger in a triangular-shaped sheath. The hilt protrudes from the sheath and the pommel is crescent-shaped. The blade would probably have had square shoulders and straight sides, ending in a sharp point. This dagger belongs to a type of weapon which perhaps could be described better as a short sword. It is portrayed on Egyptian reliefs and was in common use among the inhabitants of Syria and Palestine towards the end of the second millennium B.C.[1]

The inscription in Old Babylonian script on the back of the statue has been deciphered by M. Dossin.[2] " Moi, Aduniabia, fils d'Enna-Aya, au dieu de Nérab une demeure divine j'ai construit ma statue devant lui j'ai dressée. Celui qui détruirait ma statue, que son nom, de la terre, disparaisse."

(2) The Basalt head of Jabbul is now in the Louvre for which it was acquired by Dussaud in 1926. The place whence it originated is rather obscure, but local tradition points to the site of Tell Wasta situated in the lake itself. The head is crowned by one of those pointed Syrian caps and resembles a type of divinity similar to that found at Yasili Kaya in Asia Minor.[3]

(3) There is a polished diorite head of Bés from Rasmel Hajal, now in the Aleppo Museum (No. 471).

(4) An archaic head from Abu Jrein, also in the Aleppo Museum.

Pottery

An examination of the sherds showed that most of the sites covered several periods. Only the wares which have been considered dateable, or with distinctive features, have been described in the following summary. Many more types were discovered, but as these were plain wares with no marked peculiarities it was obviously impossible to date them without excavation.

The dispersal of museum collections, and the consequent difficulty of obtaining comparative material, has also hampered the task of identification.

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[1] Cf. Bonnet, *Die Waffen der Völker des Alten Orients*, Fig. 27d.

[2] *Le Musée National d'Alep, Catalogue Sommaire*, 1932, p. 73.

[3] *Contenau, ibid.*, Vol. II, p. 1016.

Period I

The earliest painted wares were in the form of a chequer-board design in red and black on buff slip, resembling those found at Nineveh in the 2B[1] level (Pl. VIII, Fig. 15, 1).

This occurred at Jededieh Jabbul II and Sheikh Ahmed

Foreign Relations : Nineveh, Samarra.

Period II

The next group of painted fabrics belonged to the Tell Halaf period, and consisted of fragments of straight-sided bowls with flat bases, similar to Mr. Mallowan's cream bowls from Arpachiyah.[2] The decoration on these bowls was bands of brown to red semi-lustrous paint arranged in chevrons, loops and stylized lattice patterns.

These occurred at Shirba, Sabaine, and local imitations at Jededieh Jabbul (Pl. VIII, Fig. 15, 2–6).

Foreign Relations : Nineveh 2C, Arpachiyah, Sakje Geuze[3] Carchemish,[4] Chagar Bazar,[5] Judaidah,[6] and Tepe Gawra XIV, and Til Barsip.

Chalcolithic Plain Wares. Associated with these were numerous plain wares :

(1) A brown burnished pottery from Abu Zanne, Sheikh Ahmed South, Hmaime, Deir Hafir, Suran, Shirba, Jededieh Jabbul, and Abu Jabr Kbir.

(2) Straw-tempered, plain wares with a light surface and black core, some very coarse and levigated with grits. They included jars with everted and plain rims.

These occurred at Arane, Sabaine, Beske, Sheikh Ahmed II, Berlehin, Abu Jabr Kbir, Shirba, Jededieh Jabbul II, Abu Drikha, Nedjara, Qatar, Kueires.

(3) Jededieh Jabbul plain wares, open bowls with plain rims, and jars. A straw ware with occasional grits, black core and greenish-buff surface (Pl. IX, Fig. 18); these particularly resemble the simple wares from Judaidah XIII.[7]

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[1] *L.A.A.A.*, XX, p. 152.

[2] *Iraq*, II, pt. I, *Level TT*6, Pl. 72.

[3] *L.A.A.A.*, XXIV, No. 3–4, p. 136.

[4] *Iraq*, I, pt. II, p. 152.

[5] *Iraq*, III, pt. I, *Levels* 6–12.

[6] *A.J.A.*, XLI, No. 1, p. 11.

[7] R. J. Braidwood, O.I.P., XLVIII, *Mounds in the Plain of Antioch*, p. 7.

They occur at Jededieh Jabbul, Naam, Abu Jabr Kbir.

Period III

The main dateable decorated fabric may be classed as the Syrian variety of Al Ubaid, resembling that found at Arpachiyah.[1] It is a fine green ware, levigated with a few white grits, of various degrees of coarseness. The principal shapes were : (a) bowls with straight sides and plain rims. (b) dishes with flaring rims. (c) Jugs with divided handles. (d) Large jars. The decoration consisted of brown-black to purple matt paint in chevrons, loops and hatchings (Pl. VIII, Fig. 16, 1–5).

They occurred at Jededieh Jabbul, Arane, Shirba, Naam.

Foreign Relations : Al Ubaid, Arpachiyah.

A plain ware probably of the same period is orange burnished ; a thin brown ware with a soft gritty core, in the shape of hole-mouthed jars.

This occurs at Arane, Beske, Misan, Shirba, Abu Jabr Kbir, Fudda.

Period IV

The fourth group of painted wares is said by Mr. Mallowan to resemble those of Nineveh 3[2] (Pl. VIII, Fig. 16, 6), and consists of : (a) shallow bowls with small grooved rims. (b) jars and jugs with heavy, rounded rims and high necks.

The ware is pink with a sandy surface, slightly micaceous, with bands of red-brown matt paint, on rim and inside, and outside vessels ; also vertical bars and cross hatchings.

These are found at Jededieh Jabbul and Sabaine.

Foreign Relations : Nineveh.

Period V

Uruk Ware. A single sherd of highly burnished red ware with buff core and fine hard surface, resembling the famous Erech red slip ware from Warka in Iraq. This ware was found in the Nineveh 4 level.[3]

[1] *Iraq.* II. pt. I, p. 20–21. *TT* 1–4.

[2] *L.A.A.A.*, XX, p. 164.

[3] *L.A.A.A.*, XX, p. 165.

It occurred at Misan.

Foreign Relations: Ur, Warka, Lagash, Jemdet Nasr, Mersin.

A single sherd was discovered by Professor Garstang during the preliminary excavations at Mersin in Cilicia in 1937.[1]

To this level also belong the *Votive bowls* with bevelled rims found only on the riverine sites: Tell Nas and Mesherfa.

Foreign Relations: Jemdet Nasr, Warka, Judaidah,[2] Nineveh.[3]

Other plain wares of the middle of the fourth millennium B.C. were:

(1) Thin brown ware, part of a jug or jar with well burnished brown surface.

This was found at Hamr.

(2) Crimson ware: lustrous crimson slipped surface, over soft buff core with few grits. It resembles wares from the Balik area.

This occurred at Aalam and Neirab.

Period VI

To the Sargonid period Mr. Mallowan and Prof. Sidney Smith attribute the following:

Grey ware, straw tempered and burnished on the exterior.

It occurred at Jededieh, Aqrabus, Hmaime, Kueires, and Sheikh Ahmed North.

Beske Jars. A coarse brown buff ware, with large grits; finger-smoothed surface, firing brick red to light buff. Some was black cored. On the shoulders of the jars were fingerprint rope bands[4] (Pl. IX, Fig. 19).

These jars may belong to a slightly later period and occur in various lakeside sites: Aqrabus, Arane, Sabaine, Qatar, Karayeh, Douer, Misan, Radr, Ain, Hmaime Zrir South Aalam A, Hashere, Blatt, Zanne, Khatabat, Naam, Abu Jrein.

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[1] *L.A.A.A.*, XXIV, 1–2, p. 63.

[2] R. J. Braidwood, *op. cit.*, p. 7. *Judaidah* XIII.

[3] *L.A.A.A.*, XX, p. 168.

[4] This probably connects with the rope pattern design pottery seen by Gertrude Bell at Tell Ahmar.

It also occurs on non-lakeside sites: Botan, Shirba, Maksur, Abu Jabr Zrir.

Red Washed: this is a buff-bodied ware covered with an orange-red smeared wash.

It occurs at Botan, Arane, Misan, Aalam, Abu Zanne.

Foreign Relations: Brak, Atchana.

Period VII

Of the later wares few were dateable, except some Nuzi types of buff ware with a band of reserved zigzags from Sabieh and Radr.

Foreign Relations: Billa III,[1] el Mishrifeh,[2] Nuzi.

There were large quantities of plain wares which appear to belong to the late Bronze Age and early Iron Age, but owing to the lack of evidence, they were difficult to date precisely. The only type from this period that can be fixed with any accuracy is the thin bowl ware, with Assyrian affinities dating to the eighth century B.C. The body is hard with many white grits, buff in colour and a self-smoothed surface.

It occurred at Naam, Arane, Berlehin, Aqrabus, Kueires.

A notable omission was any form of the well-known Habur ware or Syro-Hittite pottery; also the complete lack of Cypriot imported wares, which were fairly numerous on sites nearer the coast, and on the plain of Antioch.

Period VIII

The Persian period showed no distinctive types, but it is probable that some of the numerous plain green and buff wares, found on almost every site, belong here.

Period IX

Greek black glaze of the fourth century B.C. was found at Botan, Abu Zanne and Berlehin: but the matt glazed wares of the third to the second centuries were far more common, and to be found on most of the larger city sites, such as Arane, Botan, Shirba, Aalam, Neirab.

A Rhodian jar handle occurred at Sabaine.

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[1] *Museum Journal*, XXIII, No. 3, p. 259.

[2] du Mesnil de Buisson, *Syria*, 1926–7.

Period X

The early Roman occupation was marked by the appearance of Sigillata wares on a large number of sites. The wares appear to range from 100 B.C.—100 A.D. and were far more profuse than the matt glaze.

With these were cooking pot types of hard red pottery and also many of the plain jar wares common to this period throughout the Near East.

Many of the late, open sites bore only sherds of these types indicating the increased population of the Roman period.

Sites exclusively Roman: Adryssieh, Hmaime Kbir Roman site, Hmaime Zrir, Khirbet Deir Hafir, Qozdali Zrir and Kbir, Umm Addasseh.

The late Roman occupation was not well represented by sherds though again some of the plain wares probably belong to this period.

Period XI

Arab wares of blue and white glaze, such as were found in large quantities at Eske Meskene, were rare elsewhere; they were found only at Aalam, Sabaine, Hashere, and Douer.

The Sites (Map. Pl. X)

1. Aalam. South of Aleppo Meskene road, east of village. Conical mound with flat top; height about 10 metres. Traces of stone foundations.

Early Bronze Age to Roman period.

2. Aalam A. North of above, on edge of main road. Low mound almost ploughed out.

Chalcolithic to Roman period.

3. Aatra Attire. On the east of the track from Mahdum to Fudda. Small conical mound, about 3 metres high.

Persian period.

4. Abu Drikha. On the south-west of village. A large mound surrounded by low plateau; lower slopes covered by cultivation.

Chalcolithic to Roman period.

5. Abu Jrein. On north-east border of village. Large

mound with steep sides and flattened top; height about 25 metres. The foot of the tell much cut into, showing traces of a mud-brick wall and burnt layers.

Bronze Age to Hellenistic period.

6. ABU JABR KBIR. Situated between the village and river. Steep-sided tell with flattened top; about 50 metres high. Cemetery on south and west sides. Low mound extends to south.

Chalcolithic to Roman period.

7. ABU JABR ZRIR. On the east bank of river about 400 metres from village. Conical mound with slightly flattened top; height about 15 metres. Shrine on the top and a few modern graves on the east side; also a well with plentiful water (Pl. II, Fig. 6.)

Bronze Age to Persian period.

8. ABU MOKBARA. North-east of village and south of Aleppo–Meskene road. Large mound with steep sides and flat top.

Persian to Roman period.

9. ABU ZANNE. On the edge of the Aleppo–Meskene road, about 400 metres from village. Flat topped tell with steep sides; entrance to the south. Height about 25 metres.

Chalcolithic to Roman period.

10. ADRYSSIEH. To the north of the Aleppo–Meskene road. Village site consisting of low mounds, stretching over some two acres.

Roman period.

11. ALGARA. On the east side of the village. Low mound, covered by cemetery; height, 5 metres. Traces of quarrying in the rock north of the site.

Iron Age to Persian period.

12. AHMAR I. On south of Aleppo-Meskene road. Small mound, about 5 metres high.

Bronze Age to Hellenistic period.

13. AHMAR II. South of track from Arane to Assane. Low irregular mound with scattered blocks of basalt.

Late Bronze Age to Roman period.

14. AHMAR III. Site not visited.

15. AGOULA. Just south of Aleppo-Meskene road. Small

mound with cemetery on top: village to the south. 7–8 metres high.

Iron Age.

16. Ain. West of Aleppo-Sfira track. Small, very stony mound, cut into by road, and partly ploughed over.

Bronze Age to Persian period.

17. Ain Jmadjma. West of track from Jabbul to Bab. Low stony mound on rocky outcrop: covered by Arab cemetery. About 5 metres high. Between it and the road a small Roman farm, extensively robbed. Basalt columns used as head stones; lava saddle querns noted.

Iron Age to Roman period.

18. Ain Zleile. On east bank of wadi, south of Sabaine-Deir Hafir track. Low conical mound, north-east of village.

Iron Age.

19. Aqrabus. Between Sfira and Jabbul lake. Large irregular mound, with a few graves on the west side. Village abuts on north slope.

Sargonid to Hellenistic period.

20. Arane. To east of Aleppo-Sfira track. Large, flat-topped, steep-sided tell in the centre of the village. Much eroded, caves cut in the north and west faces. Traces of a large mud-brick wall, about 15 metres high visible in the cutting. Height of tell, about 100 metres.

Chalcolithic to Roman period.

21. Arbech. On north of Aleppo-Meskene road. Low mound covered with small stones; approximately 3 metres high.

Iron Age to Roman period.

22. Ayub. Site not visited.

23. Bairakdar. Site not visited.

24. Beritch. West of Nahr-el-Dahab, beside the track from Jabbul to Bab. Long, low mound, about 5 metres high, near bridge across the wadi. Two houses on the mound.

Iron Age to Persian period.

Across the wadi is an Arab settlement, covered with scattered basalt blocks.

25. Berlehin. In the foothills on the south of the Aleppo-Bab road. Small tell covered with loose stones; remains of a stone construction on the west slope.

Chalcolithic to Roman period.

26. **Beske.** On edge of lake, north of Abu Jrein. Small mound, much cut about on the north-east side; exposing mud-brick walls several metres high, resting on a burnt layer, one and a half metres thick.

Chalcolithic to Iron Age.

27. **Bijane.** On west side of wadi running from Qozdali Zrir, east of village. Conical tell with flat top, 15 metres high.

Bronze Age to Roman period.

28. **Blatt.** South of the Aleppo-Meskene road, near track to Jabbul. Low conical tell.

Bronze Age to Persian period.

29. **Botan.** North-east of Bab. High irregular mound, several cuttings around the base. Height 50 metres.

Chalcolithic to Roman period.

30. **Boudora.** North of track from Blatt to Sheikh Ahmed. Extensive low mound; under cultivation. Height, 7 metres.

Bronze Age to Persian period.

31. **Breje.** West of track from Jabbul to Abu Zanne. In marsh north of village. Small low mound, almost entirely covered by Moslem cemetery.

Middle Bronze Age to Iron Age.

32. **Byzantine** settlement. On west bank of Euphrates, about two miles from river, on Meskene-Membij track. Small hamlet at north end. Long narrow mound, higher at north end. Robber trenches show traces of foundations.

Roman to Byzantine period.

33. **Dukhan.** On east of road to Jabbul, opposite village. Long stony ridge with traces of occupation at the south end. Signs of heavy burning in cuts made by villagers. Stone door-sill. A few graves on top of site.

Bronze Age to Roman period.

34. **Deir Hafir.** North of village, on Aleppo-Meskene road. Low tell with conical top. Cut into by villagers; large black stones on west side and graves on south side.

Chalcolithic to Roman period.

35. **Douer.** On track from Tredem to Arane. Conical tell, rather stony. Cultivation round the foot.

Bronze Age to Roman period.

36. Fah. 700 metres north-west of village, near track to Abad. Low mound, about 5 metres high, covered by crop.

Chalcolithic to Roman period.

37. Fahda. East of track from Stabel to Rayane. Conical mound ; stony on top and sides ploughed over.

Sargonid to Roman period.

38. Fahetlah. (Position approximate only). On bend of Euphrates, near Meskene-Membij track. Large mound, about 200 by 100 metres ; partly eroded by river. Traces of gateway on west side Cemetery on top.

Iron Age to Persian period.

39. Faue. East of track to Sfira, north-east of marsh. Small mound under cultivation. Stones on the side of tell.

Bronze Age to Persian period.

40. Furn. On bank of Euphrates, below Kalat-en-Nedjem. Small mound about 5 metres high. Walls much robbed ; some fallen columns noted.

Hellenistic to Roman period.

41. Fudda. On desert track south from Mahdum. Large conical tell about 12 metres high. Well on east side.

Chalcolithic to Persian period.

42. Gayarieh I. West of track from village. Conical mound with flat top, about 15 metres high. Stone construction on side of mound.

Early Bronze Age to Persian period.

43. Gayarieh II. North-west of village. Small mound with rounded top, about 7 metres high. Cemetery on top.

Iron Age to Persian period.

44. Habo. On track from Blatt to Jabbul. Low conical mound covered by cultivation. Well on west side.

Iron Age to Persian period.

45. Hashere. On south of track from Arane to Jabbul. Small mound, about 9 metres high, partly under cultivation.

Bronze Age to Roman period.

46. Hagala I. On track from Sfira to south of lake ; on west of village. Large irregular mound, about 20 metres high, partly under crop.

Iron Age to Roman period.

47. Hagala II. To west of track from Sfira, on shores of

lake before reaching village. Small mound partly under cultivation. Two large stone walls, about 2 metres wide run northwards into the tell.

Sargonid to Roman period.

48. **Hamidieh.** On west of village, to south of track from Aleppo-Meskene road. Small round topped tell, about 12 metres high.

Iron Age to Roman period.

49. **Hamr.** (Position approximate only). On west of Meskene-Membij road. Conical tell with steep sides and flat top. Remains of stone foundations and fort on top.

Bronze Age to Roman period.

50. **Hassan.** South of Aleppo-Meskene road, west of track to Fudda. Small village to south. Large irregular mound, about 25 metres high.

Persian period.

51. **Hermel.** On east of village and of wadi. Low mound about 5 metres high. A few graves on the north side.

Late Iron Age to Roman period.

52. **Hmaime.** Beside Aleppo–Meskene road, about 1 kilometre from village. Large mound with long slope to south ; height, 15–20 metres. Arab grave on summit.

Chalcolithic to Roman period.

53. **Hmaime Kbir.** On south-east of village. Low mound covered by cemetery.

Iron Age to Roman period.

54. **Hmaime Kbir.** Roman site. Between Hmaime Kbir and Umm el Mara, to west of track. Extensive settlement covering some acres. Large block of basalt.

Roman period.

55. **Hmaime Zrír.** South of village and east of track. Large basalt block and lintels. (Pl. VI, Fig. 12.)

Roman period.

56. **Hmaime Zrir.** South site. On south of track to Deir Hafir. High stony mound with signs of construction. Cemetery on north-east and also cultivation. Water-hole to west.

Early Bronze Age to Roman period.

57. **Jaafar Mansur.** South of Aleppo-Meskene road, on tract from Umm Addasseh ; south-east of village. Small

conical mound, with considerable town site stretching over several acres to the east, many traces of mounds and walls. Cemetery on top of tell.

Iron Age to Roman period.

58. Jabbul. Main tell on west side under village, low irregular mound on edge of lake. On east of village, a conical mound with shrine on top; fragments of basalt on slopes. Main tell: Roman period. Conical mound: Persian period. The main tell may be identified as the "Gaboulon" of Procopius (Buildings, II, 9–10.)

59. Jalghum. On track from Sfira, south of the lake. Low irregular mound, heavily cultivated.

Bronze Age to Roman period.

60. Jambe. On the west of Sfira, towards Shaghib. Small conical mound, entirely ploughed over. Some rock cutting on east side. Small additional mound on opposite side of track.

Bronze Age to Persian period.

61. Jededieh Jabbul I. To east of road to Jabbul, on east bank of wadi. Village covers south part of mound. Long low mound sloping to the south, about 12 metres high. (Pl. II, Fig. 4.)

Chalcolithic to Iron Age.

62. Jededieh Jabbul II. On south of village. Low mound about 4 metres high, spread over a large area. Probably part of main site.

Chalcolithic to Hellenistic period.

63. Jub el Abyad. On track from Mahdum to Zaharieh, south of village. Small mound about 5 metres high. Cemetery on south slope.

Iron Age to Hellenistic period.

64. Kharaitch Daham. On track south from Umm Addasseh, 200 metres from village. Small conical mound, with graves on east side.

Persian to Roman period.

65. Karayeh. North end of lake, on track from Abu Jrein to Jabbul. Small conical mound about 5 metres high, very stony. Partly under cultivation.

Sargonid to Persian period.

66. Khatabat. North of Aleppo–Meskene road, on north

of village. Cultivated mound with rounded top, about 15 metres high. Cairn on top.

Bronze Age to Roman period.

67. KHIRBET ABUKIEH. On east of village. Small steep sided tell, with rounded top ; about 15 metres high. Slopes slightly to the east and forms centre of city site extending over some 25 acres. Many traces of mud-brick walls, stone blocks and roof tiles.

Persian to Hellenistic period.

68. KHIRBET DEIR HAFIR. On east of track to Abu Sous, three kilometres north-east of Deir Hafir. Site extends over a flat plateau ; lines of widely spaced rubble walls still visible. In the rock traces of quarrying and a few cave tombs with narrow shaft entrances.

Roman period.

69. KHIRBET DJNI. Beside track to Jaafar Mansur. Series of low mounds surrounding a central tell, covering about two acres. Cemetery on tell.

Iron Age to Roman period.

70. KHIRBET EL KHAMISS. On low ridge on east bank of wadi, north-east of Tell Lala. Extensive remains of village site and slight quarrying.

Persian to Roman period.

71. KHIRBET MALUSH. On east of Nahr-el-Dahab. Ruins of building on slight mound.

Hellenistic period.

72. KHZAF. On north shore of lake to east of village. Large steep sided mound with shrine on top ; cemetery to north. Late Bronze Age to Roman period.

73. KITA. On north-east of village. Small mound about 3 metres high. Cemetery on top and sides. Nearer village, remains of settlement.

Chalcolithic to Roman period.

74. KUEIRES SHARKIEH. At junction of Nahr-el-Dahab with Aleppo–Meskene road ; about 300 metres from road near village. Irregular mound, 8–9 metres high, cemetery on top.

Chalcolithic to Roman period.

75. LALA. On west bank of wadi, north of Umm Addasseh; north of village. Conical mound with flat top, height about

10 metres. Cemetery on south-west side. Traces of buildings on slopes. Late Bronze Age to Roman period.

76. Maaz. On east bank of wadi, on track from Mahdum to Zaharieh. Small conical mound partly under cultivation.

Persian period.

77. Mahdum. On north side of Aleppo–Meskene road. Large irregular mound extending away from the road for severa acres. Traces of robbled walls on top and in cutting beside road. Mud-brick walls and lava saddle querns.

Iron Age to Roman period.

78. Maksur. About 25 metres to north of village. Large mound about 18 metres high, with extension to the south, covering a considerable area.

Sargonid to Roman period.

79. Mesherfa (position approximate only). About 150 metres south of Haboube on Meskene–Membij road, at junction of foothills and plain. Long mound about 10 metres high with slight ramp at northern end. A few houses on south slope, cemetery on top. Sargonid to Roman period.

80. Misan. About 200 metres north-east of village, on track from Jabbul. Large irregular mound about 15 metres high, all cultivated. Mud-brick walls round north and east sides of base. (Pl. IV, Fig. 9.)

Chalcolithic to Hellenistic period.

81. Naam. At west end of lake, on track from Jabbul to Sfira. Long high tell with traces of central entrance facing lake. Height about 15 metres. All under cultivation.

Chalcolithic to Roman period.

82. Nas. (Position approximate only.) On high scarp of west bank of Euphrates ; on road from Meskene to Membij. Near village of Barbari. Natural plateau with occupation at south end.

Sargonid to Roman period.

83. Nas Cemetery. (Position approximate only.) Between Tell Nas and the track. Much robbed, showing oval and rectangular graves with plaster linings.

Sargonid period.

84. Nas er Allah. On south of village. Low mound about 3 metres high covered by modern cemetery.

Iron Age to Persian period.

85. NEJARA. In village, to east of Kueires-Bab track. Round-topped tell, about 15 metres high. Cemetery on top.

Chalcolithic to Persian period.

86. QATAR. About 200 metres north of village. Small mound, about 7 metres high; large hole on south side. Cemetery on top. Sargonid to Persian period.

87. QOZDALI KBIR. On the north side of the road from Bab to Membij, about 3 kilometres east of village. Traces of Roman khan or village, with much fallen rubble.

Roman period.

88. QOZDALI ZRIR. On the west of the village. Small mound with traces of walls.

Roman period.

89. RADR. At west end of lake, near track from Sfira to Abu Jrein. Large conical mound, about 15 metres high, surrounded by smaller mounds. Large depression in centre with holes showing traces of burning.

Chalcolithic to Roman period.

90. RASM EL ABUD. On east of village, on track to Nas-er-Allah. Low mound about 5 metres high; covered by modern cemetery.

Late Bronze Age to Roman period.

91. RASM FALAH. About 20 metres north-east of village. Low mound covered by cemetery. No sherds.

92. RAYAN. Between Blatt and Sheikh Ahmed. Low mound about 2 metres high.

Late Bronze Age to Roman period.

93. RIMAN. On south of track Arane to Jabbul. Small mound about 7 metres high. Partly under cultivation. Well on east side.

Chalcolithic to Roman period.

94. SABAINE. Near village on east bank of Nahr-el-Dahab. Long mound about 15 metres high. (Pl. IV. Fig. 8.)

Chalcolithic to Roman period.

95. SABIEH. South of track from Sfira to Naam. Very small mound in the marsh, about 3 metres high.

Sargonid to Roman period.

96. SHAGHIB. South-west of village beside Aleppo track.

Low very stony mound with well on top ; east face cut away by villagers in search of stone. Many basalt blocks and burnt layer, 1.50 metres from surface.

Sargonid to Persian period.

97. SHEIKH AHMED. East of track from Jabbul to Deir Hafir. South site : a low mound about 5 metres high, rather stony with some basalt columns and door stone. (Pl. V, Fig. 11.)

Christian period.

North site : small conical mound with cemetery on top. Very stony, about 5 metres high. Water channels to west of village.

Chalcolithic to Roman period.

98. SHEIKH AISSA. Not visited.

99. SHIRBA. On east of Nahr-el-Dahab tributary, approached from Rasm el-Abud. Village on south side. Steep tell with flat top, about 35 metres high. Surrounded by cultivated fields and fruit trees. (Pl. II, Fig 5.)

Chalcolithic to Roman period.

100. STABEL. 300 metres south of village, near track from Blatt to Jabbul. Round-topped mound with long slope to south ; cemetery on top. Small house and well on east side.

Early Bronze Age to Roman period.

101. SURAN. South of village. Low mound, very stony and cultivated.

Chalcolithic to Roman period.

102. SOUS. North-west of village, on track north from Deir Hafir. Small rounded mound about 12 metres high, very stony.

Late Bronze Age to Persian period.

103. SUKARIEH KBIR. On north-east of village in the foothills. Large mound with shrine on top ; cemetery and mud-brick constructions on slopes.

Sargonid to Roman period.

104. TAAM. On track from Mahdum to Maaz. Small mound about 3 metres high, with traces of robbed wall.

Late Bronze Age to Persian period.

105. TAFRIEH ZRIR. Between village and Nahr-el-Dahab. Conical mound. Not visited.

106. Taim. On shore of lake near Khzaf. Small mound with rounded top, mainly natural.

Hellenistic period.

107. Tubara. West of Abu Zanne-Jabbul road. Low mound, ploughed over.

Persian period.

108. Tredem. West of village on Blatt-Jabbul road. Oval mound with much stone; appears to have a rampart enclosing the central area. Gates to east and west.

Late Bronze Age to Persian period.

109. Tütün. In foothills north of Aleppo-Meskene road. Long low mound about 15 metres high; one of the largest seen. Slight robbing on west face.

Late Bronze Age to Roman period.

110. Umm Addasseh. On the north of the village, partly covered by cemetery; a small square mound from which the boundary wall has been robbed.

Probably Roman fort or camp.

11. Umm El Mara. On south of village, west of track from Deir Hafir. Huge mound with well marked walls, forming a hollow bowl: height, 15-20 metres: gateways to north and south. In centre, citadel mound, roughly square with loose stones.

Sargonid to Roman period.

112. Zaharieh I. On east bank of wadi, north of Maaz. Long mound about 12 metres high.

Sargonid to Roman period.

113. Zaharieh II. On west bank of wadi, north of Maaz. On spur of natural rock, with remains of Roman castle.

Iron Age to Roman period.

114. Zweide. East of Tell Hmaime wadi, west of village. Round-topped mound, about 7 metres high. Cemetery on top.

Persian to Roman period.

After finishing the survey in the middle of April, 1939, the expedition continued its journey down the right bank of the Euphrates to Bagdad, and returned by the great Syrian desert route to Damascus. It had been hoped to follow up the work of this preliminary survey by a small excavation in the spring of 1940 on one of the sites mentioned: plans had been arranged and provisional agreement made with the *Service des Antiquités*, but the war intervened.

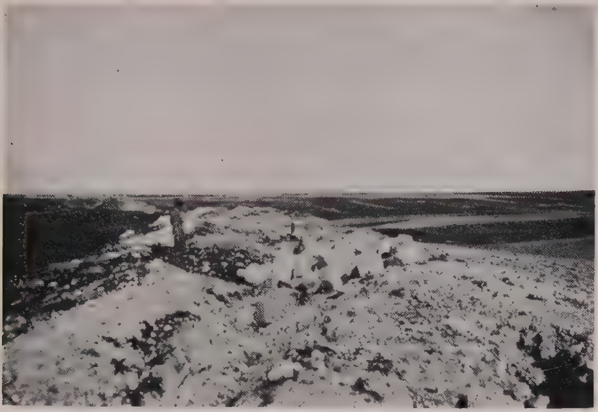

FIG. 1. MEMBIJ. ROBBING OF THE CITY WALL

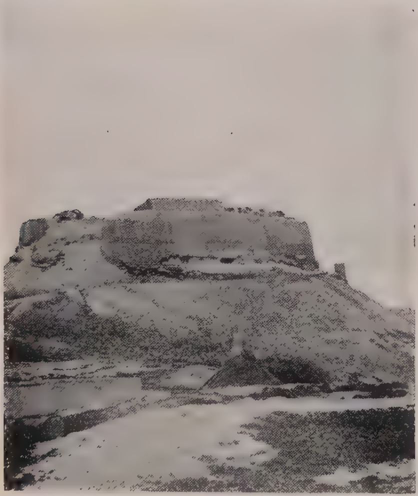

FIG. 2. KALAT-EN-NEDJEM. ARAB CASTLE FROM SOUTH

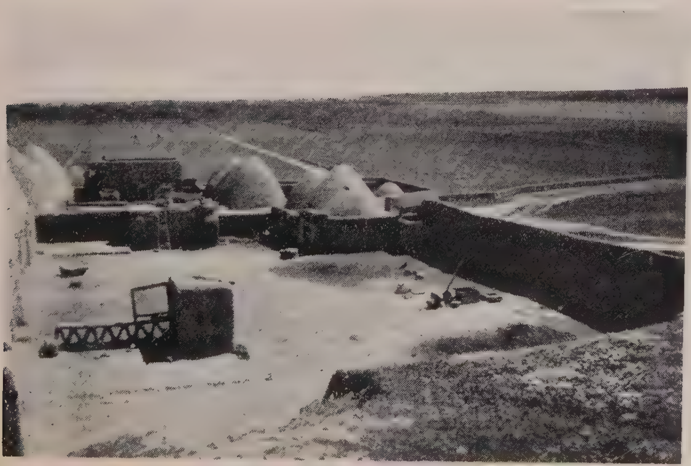

FIG. 3. BEE-HIVE HOUSES

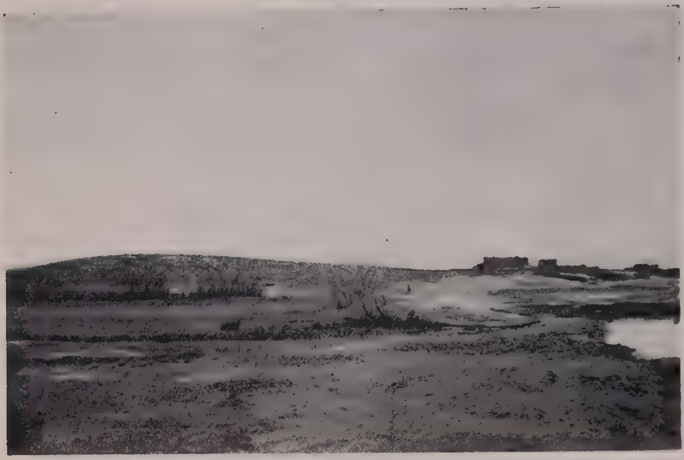

FIG. 4.
TELL
JEDEDIEH
JABBUL

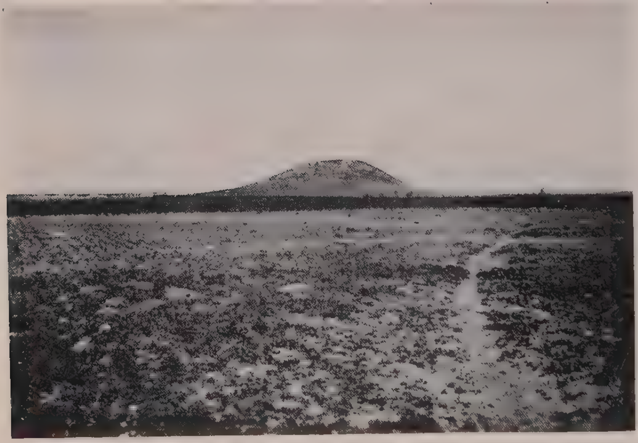

FIG. 5.
TELL SHIRBA.
FLAT-TOPPED
MOUND

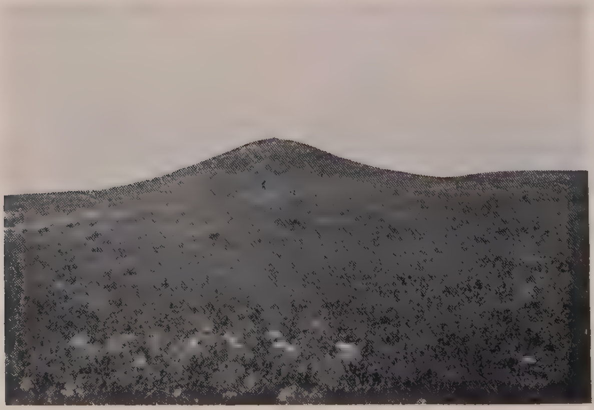

FIG. 6.
TELL ABU
JABR
ZRIR.
CONICAL
MOUND

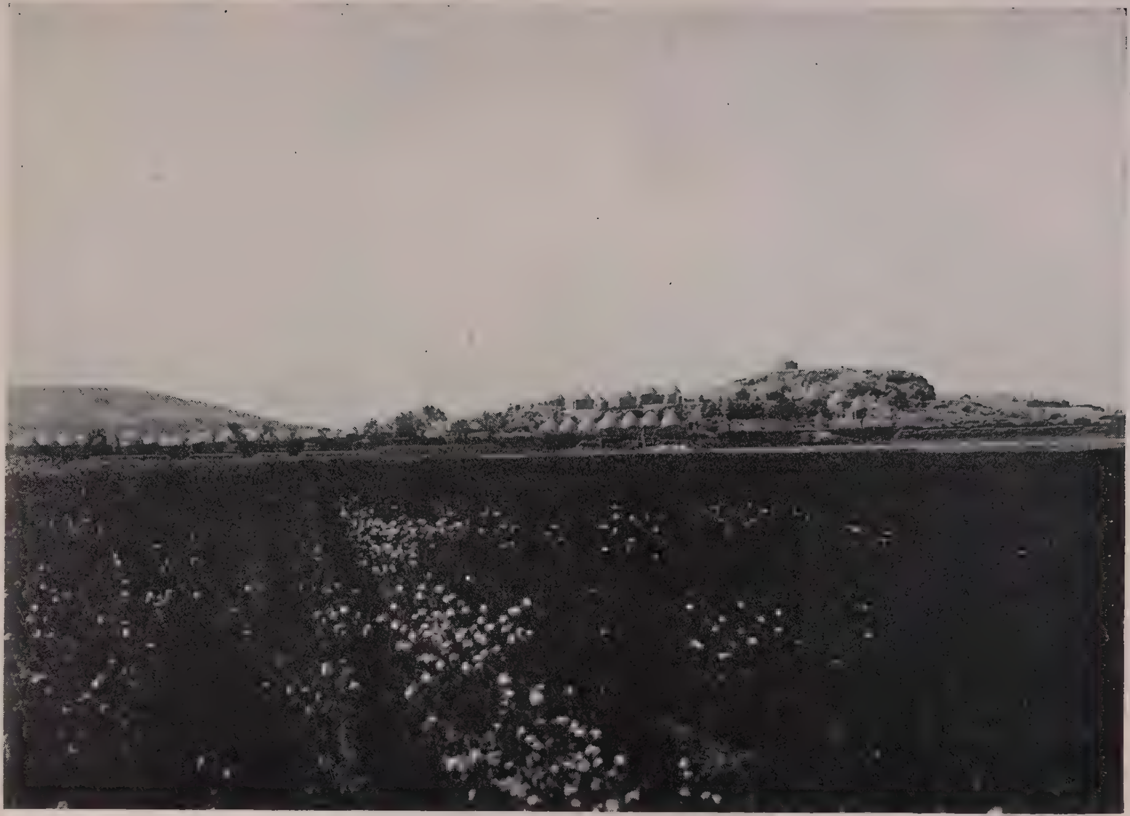

FIG 7. SFIRA. CITY SITE, VERY MUCH ERODED AND ROBBED BY VILLAGERS

FIG. 8. TELL SABAINE. LARGE CITY MOUND

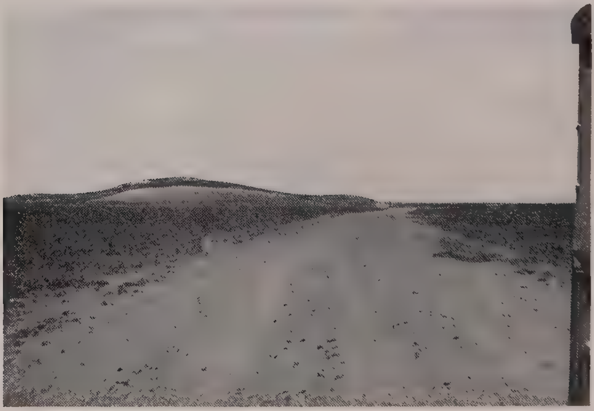

FIG. 9. TELL MISAN. HIGH CITADEL WITH EXTENDED SETTLEMENT

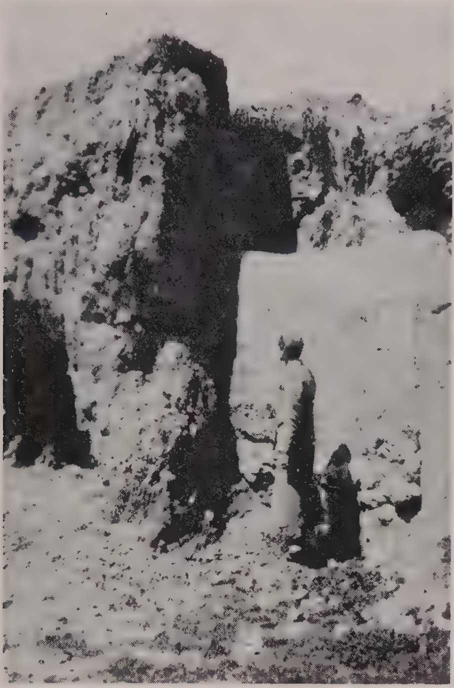

FIG. 10. ROBBER CUTTINGS MADE BY VILLAGERS

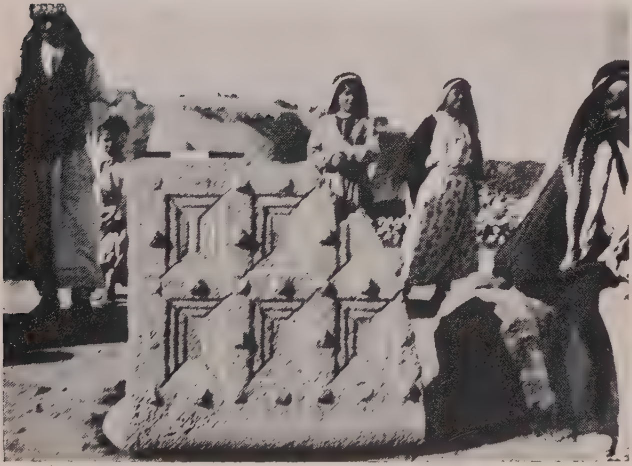

FIG. 11. SHEIKH AHMED. BASALT DOORS.

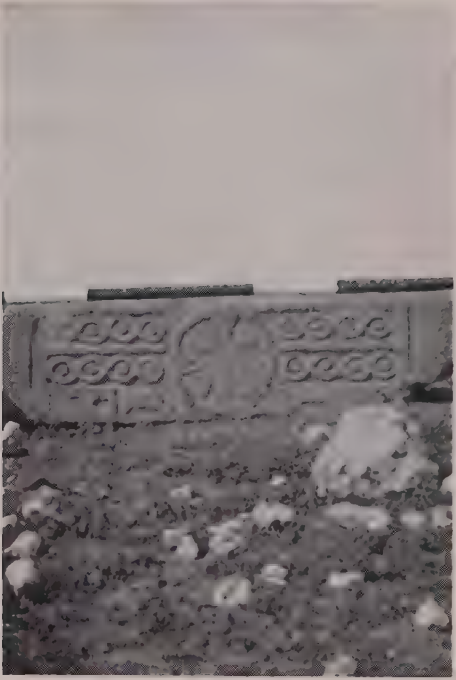

FIG. 12. HMAIME ZRIR. LINTEL OF EARLY CHRISTIAN PERIOD

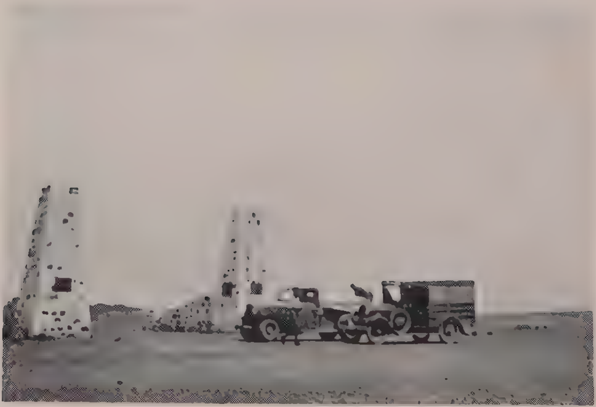

FIG. 13. ENTRANCE OF ROAD TO PALMYRA ON TRACK FROM DAMASCUS TO BAGHDAD

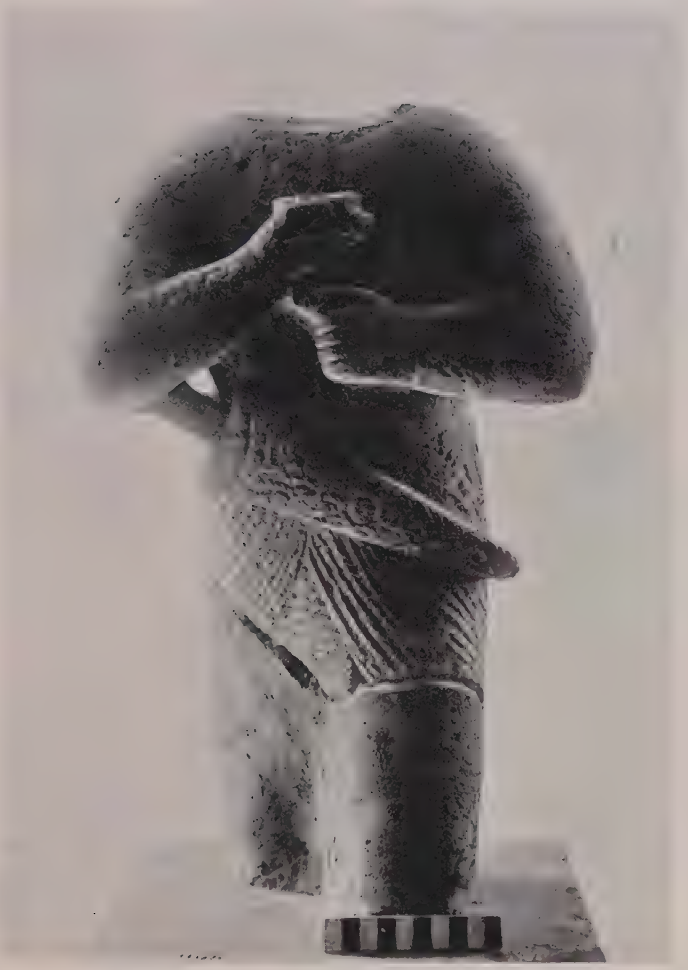

FIG. 14. STATUE OF ABUNI ABUI. THE SFIRA TORSO. ALEPPO MUSEUM

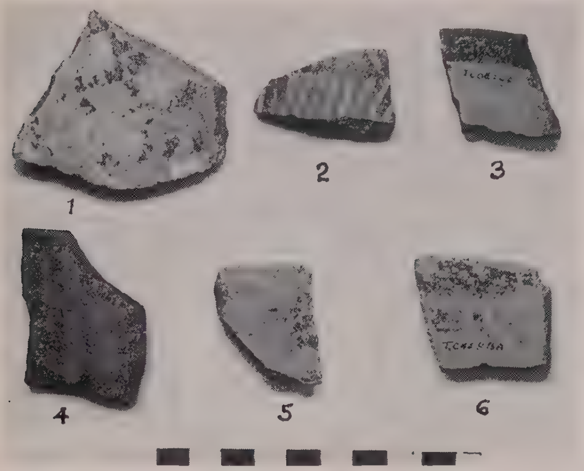

FIG. 15.
NINEVEH 2 B (1)
AND TELL HALAF
WARES (2–6)
FROM 1. SHEIKH
AHMED.
2. 6, SHIRBA.
3. JEDEDIEH
JABBUL II.
4. SABAINE.
5. JEDEDIEH
JABBUL

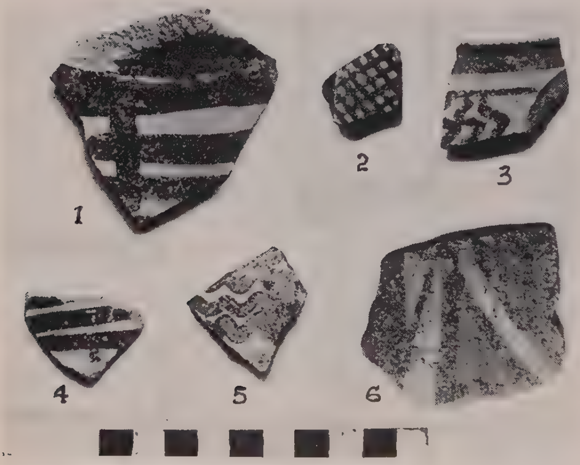

FIG. 16.
AL UBAID (1-5)
AND NINEVEH 3 (6)
WARES. FROM
JEDEDIEH JABBUL

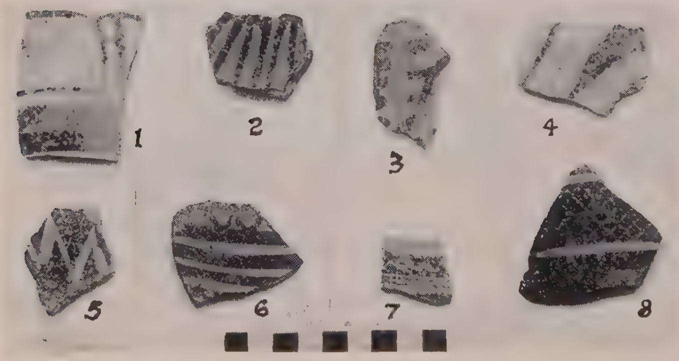

FIG. 17.
AL UBAID
(1–5)
AND
NUZI
(6–8)
WARES.
1–6 FROM
JEDEDIEH
JABBUL.
7–8 RADR

N.B. THE SCALE USED IN PLATES VII-IX IS IN CMS.

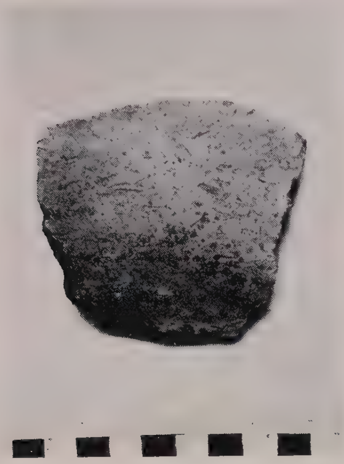

FIG. 18. STRAW WARE. JEDEDIEH
JABBUL

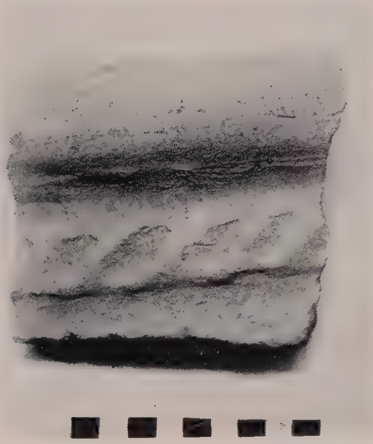

FIG. 19. JAR RIM. BESKE

THE SCALE USED IS IN CMS.

ḪABIRU AND HEBREWS

By H. H. Rowley

In a recent issue of the *Palestine Exploration Quarterly*[1] both J. W. Jack and I quite independently discussed some new evidence from Ras Shamra bearing on the Ḫabiru question. Neither of us was aware that the other was treating of this subject, and the measure of agreement in our approach was on that account of the greater significance. On the general question of the date of the Exodus Jack and I are not agreed, though we are in much more agreement than the simple statement that Jack places the Exodus in the fifteenth century while I place it in the thirteenth century would suggest. For we both accept the Amarna letters as relevant to the question of the settlement of Israel in Palestine, though I connect them with a pre-Mosaic settlement of certain tribes, while Jack connects them with a post-Mosaic settlement of the tribes Moses led out of Egypt.[2] We therefore both identify Ḫabiru and Hebrews.

On the basis of a recently discovered Ras Shamra text, both Virolleaud and Kraeling had denounced the philological equation of the two names, and assumed that the equation of the peoples fell in consequence. Both Jack and I, therefore, examined the philological equation, which Jack definitely upheld, while I, as Kraeling observes in a further discussion of the question,[3] was " more open-minded." There had long been some scholars of eminence, such as Dhorme, who had disputed the philological equation of the names, and I had never based my identification of the two peoples on doubtful, even though probable, philology. Hence, when Virolleaud produced evidence from Ras Shamra to show that the cuneiform word should probably be read Ḫapiru, it in no way menaced the basis of my views, and I was able to discuss the philological question with an open mind. I concluded that the new evidence did not exclude the philological equation, which remained, as it always had been, possible, but uncertain.

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[1] July, 1940.

[2] See J. W. Jack, *The Date of the Exodus*, 1925, and H. H. Rowley, *Israel's Sojourn in Egypt*, 1938 (reprinted from the *Bulletin of the John Rylands Library*, xxii, 1938).

[3] " The Origin of the Name ' Hebrews '," in *A.J.S.L.*, lviii, 1941, p 237–253.

In his latest discussion of the subject, already referred to, Kraeling adds little of importance on the philological side, but proceeds to discuss the origin of the name " Hebrews " on the assumption that it is unrelated to Ḫabiru, or Ḫapiru.[1] That initial assumption is not justified.

Kraeling does not deny the evidence which Jack and I independently adduced to show that interchange between *b* and *p* is found elsewhere in the group of languages concerned, but he observes that " in view of the fact that Ugaritic often preserves words more closely corresponding to the primitive Semitic form than Hebrew does, it would seem difficult to defend Jack's hypothesis that the Ugaritic form with *p* is secondary."[2] This, however, does not dispose of the possibility that the form with *b* is secondary, and my observation that " an early tendency to substitute *b* for *p* in some words is amply attested "[3] implied that I accepted the *p* form as primary. Albright, too, as Kraeling acknowledges, regards the *p* form as primary,[4] without ruling out the possibility of an equation, but Kraeling here rides out by saying " the burden of proof for the actuality of the occurrence of the transition in this word lies on those who advocate the identification of Ḫapiru and Hebrews ; the purely theoretical possibility that such a change might have taken place can carry only slight weight over against the solid fact that the two forms must be considered different until proven identical."[1] A moment's reflection will show that this attempt to throw the burden of proof on the other side, and to spare himself the trouble of offering proof of his own view, will not do. It is implied by Kraeling that he does not rule out the possibility of philological equation; it is explicitly stated by me that I do not claim the certainty of this equation. We are therefore agreed that it is possible, but no more than possible. The lack of equation can therefore be no more assumed than the certainty of equation, and the simple assumption that the lack of equation is a " solid fact " is a mere *petitio principii*. It is as incumbent on Kraeling to disprove equation as it is on others to prove equation. Evidence that is admittedly ambiguous cannot be claimed for either side.

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[1] Kraeling now spells the word Ḫa-BI-ru, where the sign BI stand for both *bi* and *pi*, to emphasize the ambiguity of the middle syllable. It therefore appears that despite the new evidence he does not claim that the reading Ḫapiru is established or certain.

[2] *A.J.S.L.*, lviii, 1941, p. 239.

[4] *P.E.Q.*, 1940, p. 92.

B.A.S.O.R., No. 77, February, 1940, p. 33.

One piece of philological evidence, which Kraeling admits would be of decisive importance if it were true, he disputes. This is Virolleaud's finding of both the *b* and the *p* forms of this name in Ras Shamra texts. Kraeling, therefore, offers an alternative interpretation of the *b* text, to neutralize this evidence. Here, again, I proceeded with caution, and while I recorded Virolleaud's view, I relegated it to a footnote, and based no argument on it, claiming no more than " it is possible, therefore, that both *p* and *b* forms of this word are found at Ras Shamra."[2] So far, therefore, Kraeling has nothing to offer that is valid against my positions.

On one point, however, he does seek to turn my argument. I was content to show the continued possibility of the philological equation of the names, and added that " the view that the Ḫabiru or Ḫapiru of the Amarna letters represent one of the waves of Hebrew or Israelite immigrants does not rest merely on this equation, nor would it fall if the equation were definitely ruled out."[3] To this Kraeling thinks it sufficient to reply that " the only other thing beside etymology that can underlie the conviction of a relationship between the Hebrews and the Ḫa-BI-ru is the assumption that the latter are foreign invaders who are conquering the country after the manner of the Israelitic tribes of the Book of Joshua."[1] But again, this is not valid against my position. For I do not identify the Ḫabiru with the people Joshua led. It is not, therefore, necessary for me to establish similarity between the methods of conquest of the Ḫabiru and Joshua.

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[1] *A.J.S.L.*, lviii, p. 240.

[2] *P.E.Q.*, 1940, p. 93 n.

[3] Ibid., p. 93.

Kraeling holds that the Amarna letters are not concerned with invasion from without, but with social revolution within the land, and he identifies the Ḫabiru with runaway or emancipated slaves. Parzen[2] finds that in the Old Testament there is something derogatory about the word "Hebrew," but Kraeling rejects a view which would so far associate Ḫabiru and Hebrew in their nuance. Yet he admits that "it is a fact that the term is chosen (when chosen at all) in situations where the Israelite is not a free citizen in a free community or on a free soil,"[3] and his own examination of the passages in the Old Testament where the word occurs bears this out. Kraeling therefore himself offers something other than etymology, which would point to a relationship between Ḫabiru and Hebrews, and his view that the Ḫabiru were runaway slaves would so well agree with Jack's view that they were the Hebrews whom Moses led out of their Egyptian bondage, that it is surprising that he did not perceive that he was offering a reason for their identification in the very act of denying that any exists.

It is, however, by no means certain that the Amarna letters are concerned with social revolution by liberated slaves, and I prefer to base nothing on this precarious hypothesis. The references to the gods of the Ḫabiru in Hittite texts, where the gods of the SA-GAZ sometimes appear when the reference is the same, would seem to imply that we are dealing with tribes rather than with social classes. The suggestion has, indeed, been made that in these texts we should not find "the gods of the Ḫabiru people," but "the god(s) Ḫabiru,"[4] but Kraeling clearly does not favour this idea, since he says "in the case of the Ḫa-BI-ru we are dealing with a social class, rather than with an ethnic group, making it even more difficult to believe that it could lend its name to a divinity."[1] The variant "gods of the SA-GAZ" on the Hittite tablets would seem to show that if the alternative Ḫabiru were the name of a divinity, it was derived from the people referred to by that name. Such an idea Kraeling rejects. Yet it is no more likely that, if the Ḫabiru or SA-GAZ were a social class, they would, as a class, have special deities.

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[1] *A.J.S.L.*, lviii, p. 240.
[2] *A.J.S.L.*, xlix, 1932–3, pp. 254–261.
[3] *A.J.S.L.*, lviii, p. 245.
[4] *Cf.* Jirku, *Z.A.W.*, xliv, 1926, pp. 237–242.

In view of Kraeling's statement that the only non-etymological basis for the identification of Ḫabiru and Hebrews is one on which neither he nor I rely, it is perhaps necessary for me to indicate what I meant by my statement, which he seeks so lightly to turn. I may preface this by an outline of my view, which covers a much wider field than can here be re-traversed, in order that the elements here treated may be seen against the background of the whole. For the arguments on which the view as a whole rests, and the material which it seeks to synthesize, I must refer to my earlier writings.[2] I would only warn the reader that I do not claim to offer a demonstration that amounts to a proof, for no reconstruction of this period can claim to offer such a demonstration. Probability, not certainty, is the utmost that can be attained.

I hold that in the early part of the fourteenth century B.C. an Israelite group, which had for some time been settled in the south of Palestine, and which certainly contained Judahite, Simeonite and Levite elements, obtained possession of further South Palestinian districts. Associated with them were Kenite and other non-Israelite elements. The Simeonite and Levite elements reached the Shechem district, where they were guilty of an act of treachery, in consequence of which Simeon was forced to fall back on Judah, to be absorbed in that tribe, while Levi was more widely scattered, and ceased to exist as a territorial unit, but in a later age gradually took on a functional character as priests. Simultaneously, other associated Israelite tribes—the Leah tribes—were gaining possession of other Palestinian districts, while farther to the north kindred tribes, whose more distant connection is indicated in the description of them as concubine tribes, were securing control of the districts in which they settled. In the same age other associated tribes separated from the southern group, in consequence of some inter-tribal jealousy, and went into Egypt, where, in the time of Ikhnaton, one of them attained position and honour. When the Simeonite and Levite elements were scattered, some of the members of these tribes went to Egypt to join the recently separated elements that had gone thither. Amongst these were the forbears of the Levite Moses, one of whose ancestors had married a member of the Yahweh-worshipping Kenite clan. This explains both the presence of the name Jochebed in the family, and the flight of Moses to a Kenite when he was compelled to leave Egypt. This flight took place during the reign of Rameses II, who was the Pharaoh of the Oppression. The Exodus took place at the beginning of the reign of Merneptah, when Moses led the Israelites out of Egypt in the name of the Kenite god Yahweh, to whose worship the people dedicated themselves at Sinai in gratitude for the signal deliverance they had experienced. After a short time—the forty years' sojourn in the wilderness is mainly associated with Kadesh Barnea, and therefore not with this group, but with the earlier group—under Moses' successor Joshua, they crossed the Jordan and attacked the Central Highlands. If, as I have suggested, Levi and Simeon were closely associated with Judah in their movement, and when they were scattered some of them went down into Egypt, while others fell back on Judah, we could understand why some of Moses' connections should be at Bethlehem-Judah, and why his grandson (Judges xviii, 30) should be found there (Judges xvii, 7).[1]

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[1] Loc. cit., p. 253 n.

[2] *Israel's Sojourn in Egypt*, 1938, and "The Eisodus and the Exodus," *Expository Times*, l, 1938–9, pp. 503 ff.

The Amarna letters tell of trouble in South Palestine and in North Palestine, and while some of the texts refer to the enemy as SA-GAZ, and only the texts from Abdi-ḫiba of Jerusalem refer to them as the Ḫabiru or Ḫapiru, it is certain that they were kindred or associated tribes. Jack distinguishes too sharply between Ḫabiru and SA-GAZ, but is almost certainly right in finding two separate fields of the enemy activity, one in the south and the other in the north.[1] Of places in South Palestine that supported the enemy, Abdi-ḫiba mentions Gezer and Ashkelon (Knudtzon 287 : 14), Lachish (287 : 15, 288 : 43 f.), Gath and Keilah and perhaps Rabbah (290 : 9 ff.).[2] The only place in the Central Highlands he refers to is Shechem (289 : 23), which had been delivered over to the Ḫabiru.

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[1] *Cf.* my paper "The Danite Migration to Laish," *Expository Times*, li, 1939–40, pp. 466 ff., esp. pp. 470 f.

This bears no recognizable relation to the Israelite invasion under Joshua. As Garstang has said : " No historical connection can be traced between the Ḫabiru revolution and the original invasion of Canaan by the Israelites under Joshua. The two movements were essentially distinct."[3] Similarly Cook : " The events in the Amarna Letters cannot be identified with Joshua's invasion from the south without entirely stultifying the Biblical narrative. The Habiru, who are mentioned only in Abdi-Khiba's letters from Jerusalem, are evidently the SA.GAZ, who are found also in the north with Abd-Ashirta, and can scarcely be the Israelites under Joshua."[4]

In Judges i we are told that Judah and Simeon together attacked the territory Judah occupied after the death of Joshua. In verses 16 ff. we read of their action in the district of Arad, leading to an attack on Zephath, which was utterly destroyed and called Hormah. In Num. xxi, 1 ff. we read that back in the days of Moses advance had been made from the south on Arad, resulting in an Israelite victory and the destruction of some cities, and the calling of the place Hormah. It is commonly held that these are two accounts of a single incident. The representation of the action as one of the tribes of Judah and Simeon only is contrary to the dominant account of the book of Joshua, and is therefore not due to any harmonizing motive, and is probably to be trusted. On the other hand, the assigning of this event to the period following Joshua, and the representation of it as taking place from the direction of the north, might be due to a harmonizing motive, and is probably to be distrusted. We may, therefore, assign it to an earlier date, and regard it as an incident in a northward move of Judah and Simeon into the territory they afterwards occupied.[1] There is nothing in the fragment itself to indicate the age of the events it records, or to connect them with Moses. Indeed, it would be surprising if after such a success some further advance northwards were not made. Yet that would be inconsistent with the account of the Mosaic tradition.

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[1] *The Date of the Exodus*, pp. 144 f.

[2] *Cf.* Knudtzon, *Die Amarna-Tafeln*, ii, pp. 1,311, 1,330 f., 1,342.

[3] *Joshua-Judges*, 1931, p. 255.

[4] *C.A.H.*, ii, 1924, pp. 356 f.

In Gen. xxxiv. we read of an act of treachery of Simeon and Levi against Shechem, and this is commonly brought into association with the curse pronounced on Simeon and Levi in Gen. xlix, 7 : " I will divide them in Jacob, and scatter them in Israel." It would therefore, seem likely that Simeon and Levi once had a hold in the Shechem district, but failed to maintain it. If, in consequence of this treachery, Simeon was scattered and ultimately disappeared, it is improbable that the account of Judah and Simeon setting out as allies for the conquest of a home represents any subsequent event. It is more likely that the move against the south preceded the temporary grip of Shechem, and that the account in Num. xxi, 1 ff. and Judges i, 16 ff. deals with events that preceded those recorded in Gen. xxxiv. Hormah opened the way to advance, and Simeon pressed on with Levi, after the victory recorded in Judges i, 4 ff., when apparently the army of Jerusalem was defeated, since its leader was carried into Jerusalem to die there. The subsequent disaster that befell Simeon and Levi irrevocably broke these tribes.

This would, therefore, seem to place the victory of Hormah roughly in the age of the descent into Egypt, but actually before that descent. For at the time of Joseph's kidnapping, his brethren are represented as being in the Shechem district (Gen. xxxvii, 13). Yet it is to be noted that Joseph is said to have been despatched from Hebron (Geb. xxxvii, 14), which was the chief town of the district occupied by Judah. If Simeon and Judah had together moved against the southern district, and Simeon then moved farther north, it would not be surprising for the two groups to keep in touch with one another by means of messengers. And Gen. xxxvii deals with a time when there were two groups of Israelites, one in the Hebron district and one in the Shechem district, prior to Joseph's being carried into Egypt.

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[1] *Cf.*, Burney, *Israel's Settlement in Canaan*, 1918, pp. 28 f.

It has already been noted that in the Amarna letters there is a reference to the presence of the Ḫabiru in the Shechem district. Abdi-ḫiba refers to Labaya and the land of Shechem having given all to the Ḫabiru (Knudtzon 289 : 22 ff.). This text associated Labaya with Shechem, and the unnamed town in a text which comes from Labaya's hand is, therefore, with some probability, identified with Shechem. There we read : " The city was conquered by treachery. As with one who had made peace, and as with one who had taken an oath, was the chief with me. Hence the city was conquered " (Knudtzon 252 : 9 ff.).[1] This is curiously similar to the account given in Gen. xxxiv, and it provides a non-etymological reason for associating that Biblical incident with the Ḫabiru of the Amarna age, and so of connecting the incidents about Arad and Hormah with the troubles in the south of Palestine in the Amarna age. There is here also a further indication, which I had not before noted, that the descent into Egypt took place in the Amarna age, and roughly synchronized with the settlement of Judah in the south and the attempted settlement of Simeon and Levi in the central highlands. It may also be noted that the use of the term " Hebrews " in the Old Testament is, as Kraeling observes,[2] "spotty " in its occurrence, and that " the first ' cluster ' of passages is that found in the Joseph stories, which dwell on Egyptian-Israelite relations."[3] The messenger who is sent from Hebron to Shechem, in the age when treachery so similar to Ḫabiru treachery in that district took place, is called a Hebrew. Here is a reason, other than etymological, for connecting the terms. Joseph and his people are called Hebrews, and their descendants in the time of the oppression are given the same name, but it is nowhere used in the narratives of the deliverance under Moses or the settlement under Joshua. Again, therefore, this detail, trifling though it is, and unable to bear much weight, as I fully recognize, fits well into my view that those who went into Egypt were associates who had separated from the Ḫabiru who advanced northwards into Palestine, but offers no support to those who would identify the Ḫabiru with the people Joshua led.

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[1] Translation of Mercer, *The Tell El-Amarna Tablets*, ii, 1939, p. 657.

[2] *A.J.S.L.*, lviii, p. 241.

[3] Ibid., p. 242.

Again, it may be recalled that in inscriptions of Seti I and Rameses II mention is made of a people 'Asaru, who would seem to have occupied the district that the Israelite tribe of Asher is said to have occupied.[1] Although the identification has been contested or doubted, it seems reasonable to find here evidence that the tribe of Asher had entered the land prior to the reign of Seti I, i.e. before 1314 B.C. When, therefore, we find in the Amarna letters evidence that Zurata of Acco, which lay within the borders of the tribe of Asher, was actively engaged in war against the SA-GAZ (Mercer 290a: 22 ff.), it is not unreasonable to connect the settlement of Asher with the Amarna age.

Other evidence which would point to a connection between the Ḫabiru and the Hebrews is of a more indirect character. To identify the Pharaoh of the Oppression with Rameses II, and to place the Exodus at the beginning of his successor's reign, with the settlement of Israelite tribes under Joshua in the centre of the country soon after the Exodus, seems to me best to harmonize the Biblical material with the archaeological evidence from Egypt and from Palestine. But the Biblical evidence strongly supports the view that the descent into Egypt took place about a century and half earlier than the

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[1] *Cf. C.A.J.*, ii, p. 319. It should be added that in the Keret text from Ras Shamra mention of Asher and Zebulun is found by Virolleaud (*La Légende de Keret*, 1936, pp. 35, 39) and Dussaud (*Les découvertes de Ras Shamra et l'A.T.*, 1937, p. 103), who, however, locate the tribes in the Negeb in that age. Albright, who rejects the whole Negebite theory, denies also these references to Asher and Zebulun, and renders the passages differently (*B.A.S.O.R.*,. 63, October, 1936, pp. 27, 29; 71, October, 1938, pp. 38f.). De Vaux, on the other hand, who also rejects the Negebite theory, and who finds evidence that the geographical setting of the Keret text is in Galilee, accepts the reference to these tribes, and sees in them evidence that in the fifteenth century B.C. they were already in occupation of their homes in Palestine (*Revue Biblique*, xlvi, 1937, pp. 372, 542).

Exodus,[1] and this falls in the Amarna age. This age well fits the conditions of the time as described in the Bible. As Cook describes it : " People were being sold for food to Yarimuta ; and were actually fleeing for refuge to Egypt, where Syrian (Palestinian) officials, like Yankhamu and Dudu, could hold high positions."[2] Many details of the Joseph story, including the choice of his wife, are most appropriately understood in the light of that age, and the Joseph story provides a fitting explanation of the silence of the Egyptian chancellery in response to the urgent appeals for help against the Ḫabiru and SA-GAZ contained in the Amarna letters, on the view that Joseph himself belonged to the Ḫabiru.

It must be emphasized that I not only set no store by the philological equation of the terms Ḫabiru and Hebrews, but that I do not equate their area of meaning. Ḫabiru are found in Nuzi and other texts, and ʻAperu in Egyptian texts, where it is quite unnecessary to assume any relationship with the Hebrews of the Old Testament. That the Hebrews in Egypt were in bondage was bitterly remembered, and it would not be surprising if the word ʻAperu were applied to foreign serfs beyond the group that Moses led out,[3] just as in a later age " Chaldaean " developed a non-ethnic meaning. Similarly, in Nuzi texts, where a social meaning of the word Ḫabiru is found,[4] it may rest on an older ethnic use. Speiser's view that a non-ethnic term tended to develop an ethnic use[5] is very improbable, since there is nothing to suggest that in a later age any ethnic unity was felt, in association with this term, between Ḫabiru of the various districts where they are known to have been found. It is much more likely that the ethnic use is the older, and that where the Ḫabiru ceased to be ethnically important the term acquired a pejorative nuance.[1] Similarly the term Hebrews, while it has an ethnic sense in the Old Testament which it never wholly lost, is often found in contexts where a pejorative sense can be given to it, because dealing with an age when Hebrews were under alien domination. But there is nothing whatever to suggest that the ethnic use was a later development.

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[1] The sole Biblical statements in disagreement with this are Ex. xii., 40 and Gen. xv, 13. A late chronology can hardly be trusted against the much older traditions.

[2] *C.A.H.*, ii, 1924, p. 357.

[3] *Cf.* Wilson, *A.J.S.L.*, xlix, 1932–3, pp. 275–280.

[4] *Cf.* Chiera, *A.J.S.L.*, xlix, pp. 115–124 ; Lewy, *H.U.C.A.*, xiv, 1939, pp. 587–623, xv, 1940, pp. 47–58.

[5] *A.A.S.O.R.*, xiii, 1933, pp. 13–54. *Cf.* Kraeling's criticism, *A.J.S.L.* lviii, pp. 243 f.

Kraeling suggests as an attractive possibility that the name Hebrews " came into vogue some time in the early history of the monarchy as a result of Israelite self-orientation in the world in which it had become a power."[2] This is unusually improbable. For the term does not appear at all in any of the narratives of the early monarchy, save in the earliest days of Saul. But it also appears in the account of events that preceded the rise of the monarchy, in 1 Sam. iv, 6, 9. It is found contemptuously used on the lips of Philistines, but it is not found as a term of pride. It stands in Saul's rallying cry to his oppressed fellow-countrymen " Let the Hebrews hear " (1 Sam. xiii, 3), but it is nowhere used of the Israel which had become a power. It vanishes almost completely from the Old Testament with the foundation of the monarchy, and the assumed vogue, which is wholly without evidence as the instrument of its assumed purpose, must have been singularly brief and ill-starred. Is it not more probable that when Hebrews came out of Egypt, where the word had become a term of contempt, synonymous with serf, it fell into relative disuse, and similarly when in the age of Saul they broke loose from the yoke of the Philistines, who spoke of them by their ethnic name but again imported contempt into it, it again fell into the background?

I have no theory of the origin of the name Hebrews, whether it is to be equated philologically with Ḫabiru or not. Kraeling suggests that just as in a later age 'Ēber-hannahar (=over the river) is used under the Persian government as a name for the province west of the Euphrates (Ezr. iv, 10), so in an earlier age the same term might have been used by peoples on the west of the river for the districts to the east, to become abbreviated to ‘eber, and then to yield to gentilic ‘ibri.[1] A gentilic from a preposition does not seem a very convincing probability, and it is highly improbable that in the early days of the monarchy a term which meant “ over-ites ” as an abridgement for “ people from over the Euphrates ” should have come into vogue as the symbol of national consciousness for a people that does not seem in that age to have been specially conscious of its eastern origin as the essence of its distinctiveness. So long as the philological equation of Ḫabiru or Ḫapiru with ‘Aperu and Hebrews remains possible but uncertain, it seems wiser to refrain from offering an etymology for ‘ibrim, since any suggestion must assume either the admittedly doubtful equation or the equally doubtful lack of equation. And for the view that Ḫabiru and Hebrews are terms that overlap, and that the Amarna letters are relevant to the history of the Hebrews, it seems wiser to continue to rely on non-philological grounds, which are more abundant than Kraeling allows. They do not yield any “ proof,” but I think they yield stronger probability than anything that can be alleged against them.

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[1] *Cf.* Meek, *Hebrew Origins*, 1936, pp. 6 ff., where the pejorative sense of Ḫabiru, 'Apiru and 'Ibrim is treated as a ground of their association. It may be noted that this is a non-etymological ground.

[2] *A.J.S.L.*, lviii, p. 246.

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[1] Ibid., p. 252. *Cf.* Brown-Driver-Briggs, *Hebrew Lexicon*, s.v.

THE DATE ASSIGNED TO A TOMB AT SARDIS

By G. M. FitzGerald

In questions of chronology the importance of exactitude is so obvious that it can fairly be pleaded as an excuse when differences of opinion on matters of no very great intrinsic interest may appear to be overstressed. There seem to be grounds, in the present case, for inquiring into the dating of a burial at Sardis, in Asia Minor, which has given currency to a novel, and perhaps mistaken, notion about the earliest appearance of the moulded terracotta lamp with decoration in relief. This is a distinctive fabric, well known in Palestine as elsewhere, and apt to be relied on as a criterion of date in the Hellenistic period.

The tomb now in question was published in the course of the sixth preliminary report on the Sardis excavations,[1] where it is described as a Lydian tomb reused in Hellenistic times. Among the twenty-two objects found in it were a coin (of which more hereafter) and five lamps which are included in a photograph of the burial furniture (fig. 9), published with the description " Contents of Hellenistic Tomb : date ca. 190 B.C. : Sardes." A drawing of the lamps (fig. 10) shows that four of them are of decorated types which, according to received authorities, should not be earlier than about the middle of the second century B.C.[2]

A first reading of the publication did not suggest any great likelihood that the date, about 190 B.C., which was proposed on the evidence of a single coin, would come to be generally accepted, but more recent authorities have shown an unexpected lack of scepticism.

The newly published catalogue of finds from Mr. and Mrs. Horsfield's excavations at Petra[3] includes a lamp fragment, described as Nabataean and dated " before 50 B.C.," but further stated to be of a Hellenistic type originating in the east—with a reference to " Broneer Type XIX," as well as to our Sardis tomb as " of 190 B.C." Attention is thus directed to Mr. Broneer's very valuable publication of the terracotta lamps from Corinth,[1] in which the early date for the Sardis finds is apparently accepted without question. Although the general evidence from Corinth confirms the view that lamps of this sort did not come into use before about 150 B.C., the Sardis tomb is cited in support of the statement that " in Asia Minor the moulded lamps were used as early as the beginning of the second century " though " in the west they did not become common until later "[2]—from which it is but a step to the attribution of an eastern origin to these lamps, as in the Petra catalogue.

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[1] *American Journal of Archaeology*, XXVI (1922), at p. 401.

[2] E.g., Deonna, *B.C.H.*, XXXII (1908), at p. 146 (Lamps from Delos).

[3] *Q.D.A.P.* IX (1941), pp. 105 seqq., v.p. 134 and Pl. XVI, No. 107.

The original basis for the whole theory seems to be the assertion made in the publication of the tomb[3] that " added importance is given to the discovery through the presence among the finds of a bronze coin that can be quite exactly dated." This coin, bearing the head of Heracles on the obverse and an amphora with the legend ΣΑΡΔΙΑΝΩΝ on the reverse, is of a known type which had been found before at Sardis.[4] It appears in the British Museum Catalogue[5] and is there assigned to the period before 133 B.C.—the year in which Sardis, upon the death of Attalus III of Pergamum, passed into the possession of Rome. If this dating had been accepted no controversy need have arisen, as the coin obviously provides only a *terminus post quem* for the burial and an approximate date for the tomb furniture. The report, however, goes on to state that the late Mr. E. T. Newell (than whom there could be no better authority) called attention to the similarity of the head on the bronze coin to the Heracles type on a silver tetradrachm from Sardis published by Imhoof Blumer; then follows this sentence: " As this tetradrachm can be dated to 189 B.C., or the following year or two, the copper coin can be safely assigned to the same date, that is, immediately after the resumption of autonomous coinage by the cities of Asia, which resulted as a consequence of the Roman victory at the battle of Magnesia in 189 B.C."

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[1] O. Broneer, *Corinth*, Vol. IV, pt. II (1930).

[2] *Op. cit.*, p. 54; cp., p. 70.

[3] *A.J.A.* XXVI, p. 403.

[4] H. W. Bell, *Sardes*, Vol. XI, *Coins*, Pt. I, 1910–14, No. 260 (from Tomb S3, which is apparently still unpublished).

[5] *B.M.C.*, *Lydia* (1901), Sardis Nos. 45, 46, Pl. XXIV, 13. Mr. Bell (*loc. cit.*) points out that the head should be described as beardless and that the reverse type is an amphora, not a cantharus.

There is no need to dwell on the obvious temerity of dating a burial to about 190 B.C. on the strength of a coin attributed to a year or two later; the question now is whether either the silver or the bronze coin can be proved to have been minted within a few years of 189 B.C. As no other authority is cited, the publication must be assumed to have relied on an interpretation of Imhoof Blumer's remarks concerning the silver coin.[1] After observing that it recalls the tetradrachms of Alexander the Great's types which were struck by some cities of western Asia Minor in the second century, after the battle of Magnesia (189), he adds that it is to this same period (*cette même époque*) that the Sardis tetradrachm must be assigned. But surely these words of Imhoof Blumer's cannot have been intended to limit the period in question to a year or two after the battle of Magnesia; indeed they might fairly be interpreted as extending it to the end of the century.

J. P. Six[2] aims at greater precision. From a comparison of the Heracles head on the Sardis tetradrachm with the coinage of Attalus II he concludes that the former may be assigned to the reign of Attalus III (138–133 B.C.). In the British Museum Catalogue, B. V. Head states that this issue of tetradrachms succeeded those of Alexander's types " probably immediately after B.C. 133."[3]

The opinion expressed in the publication (apparently with Mr. Newell's support) that the bronze coin from the tomb is of about the same age as the tetradrachm is thus seen to involve the admission that there is respectable authority. for dating both coins at least half a century later than 190 B.C

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[1] F. Imhoof Blumer, *Monnaies grecques* (1883), p. 388, No. 27, and Pl. G, 23.

[2] *Numismatic Chronicle*, Series 3, Vol. XVII (1897), p. 190.

[3] *B.M.C.*, *Lydia*, Introduction, p. xcviii; *cf.*, p. 237.

Moreover, even if numismatists should find reason for attributing a somewhat earlier date to the bronze coin, the possibility would remain that the lamps and other objects from the burial might not be exactly contemporary with it. Clearly, then, this Sardis tomb ought not to be cited in support of any theories based on the supposed appearance of moulded lamps in Asia Minor at the beginning of the second century B.C.

NOTE ON A JAR STAMP DISCOVERED AT TELL ED-DUWEIR

By E. L. Sukenik

In the April issue of the Palestine Exploration Quarterly Dr. Diringer started the publication of the interesting series of stamps on jar handles found at Tell ed-Duweir. While I may say that his interpretations are in general correct, there is one stamp the reading of which has to be corrected.

Dr. Diringer thinks that stamp No. 10, p. 48, Pl. IV, fig 3 (D/X, No. 6117) contains the name of a woman *Nehamah* (daughter of) *Seliyahu*. In my opinion the stamp should be read

לנחמ
הצליהו

i.e., *Le-Nahum* (son of) *Hissilyahu*. The name *Hissilyahu* is also found on Ostracon I of the Lachish Letters (*Lachish* I, p. 23). If so, we shall not be forced to find a woman's name on a jar handle as Dr. Diringer remarks on p. 49.

CORRESPONDENCE

Sir,

In his letter to you of the 29th September last, Mr. W. F. Bushell discusses the heights of the central ridge of Palestine, and remarks that "the figure 3,747 feet is generally quoted for Juttah, just south of Hebron."

It is a fact that this figure appears on the well-known P.E.F. Map of Palestine, on the scale of 3/8 inch to one mile. I have before me the edition of 1917, and on this edition the height 3,747 feet will be found close to the town of " Yutta."

But neither this height, nor anything like it, is to be found on the most recent map, namely, the map on the scale of 1/100000, dated 1936, issued by the Survey of Palestine, under the direction of Mr. F. J. Salmon, C.M.G., M.C. The heights are given in metres, and the greatest height shown, near Yutta, is 832 metres, or 2,730 feet. Is it possible that there was a draughtsman's error on the old map, and that the height near " Yutta " should read 2,747 ?

I may add that we must expect minor differences between the heights on the old map and those, which are much more accurate, on the new. Thus, at a point about two miles north of Hebron there is a point on the old map marked 3,370 feet ; on the new map this is given as 1,020 metres, or 3,347 feet. Similarly, Tell Asur on the old map is marked 3,318 feet ; on the new map this appears as 1,016 metres, or 3,333 feet.

Yours faithfully,

Winchester, C. F. Arden-Close.

18th January, 1942.

REVIEWS AND NOTICES

The Life Of General Sir Charles Warren. WATKIN WILLIAMS.
With a Foreword by the Earl of Clarendon, K.G. Basil Blackwell,
Oxford, 1941. Price, 25*s*. net.

This well-written account of the life of an eminent soldier, who served his country in many different capacities, will make a special appeal to all those interested in the exploration of Palestine. For it was Charles Warren who began the long series of our excavations which have been in progress, off and on, since 1867, and his name is justly connected with some of the more striking archaeological discoveries made in Jerusalem. Mr Watkin Williams, who has written this biography of his grandfather, has described clearly and sympathetically the many varied experiences which fell to Warren's lot. It is not often a biographer's task to cover so wide a field.

During the first half of his long life Warren had been responsible for the carrying out of many undertakings of interest and difficulty, and, during this portion of his career, he was almost uniformly successful. He was the first to carry out excavations for our Fund. When he started work he was in touch with our "old guard," with Dean Stanley, George Grove, Walter Morrison, James Fergusson, Professor Palmer, Hepworth Dixon, and others whom he mentioned in 1925 when he wrote to the *Quarterly* on the occasion of our Diamond Jubilee. In this letter he said, "What struck me most of all was that these men were partisans holding extreme views, differing from one another, and yet each assisting to work with one will in pushing on the P.E.F." It was part of his character that he enjoyed debate and discussion and was accustomed to express his own opinions with some force. He held the view that controversy was "the breath of life to undertakings like the P.E.F." The present writer remembers a letter that he received from Warren in his old age, and in this letter he expressed his opinion of a small cartographic error (subsequently remedied), which had been made in a map about to be issued by the Fund. Warren's opinion was expressed in no uncertain terms.

Mr. Williams gives an admirably clear history of Warren's activities ; his work for the Recovery of Jerusalem from 1867 to 1870 ; his success in settling the difficult boundary dispute between the Orange Free State and Griqualand West in 1876—77 ; his command of the forces in Griqualand and Southern Bechuanaland in 1878 ; that exceedingly risky and successful adventure in the Sinai Peninsula in 1882, when he captured the murderers of Palmer and Gill ; his command of the Bechuanaland Expedition of 1884—5, when he showed his diplomatic skill in coming to an amicable agreement with President Kruger. As to the last-named expedition, General Wavell has said that it was " thoroughly well organized and run." The present writer can remember the dinner given to Warren at Chatham before he embarked to take command. At this dinner the presiding officer remarked that Warren was probably the only Fellow of the Royal Society who had ever commanded a mixed expedition.

Then we find him unsuccessfully contesting the Hallam Division of Sheffield ; then, for a few months in 1886, Governor of the Red Sea Littoral ; and then Chief Commissioner of the Metropolitan Police of London. He held this important, but troublesome post from March 1886, to November 1888, when he resigned owing to differences of opinion with the Home Secretary.

He was then appointed to commands at Singapore and Chatham, the latter from 1895 to 1898. The writer is one of many who enjoyed the hospitality of Government House in those days. He was considerate and kind to junior officers, but it may be whispered that senior officers found him, at times decidedly " difficult."

Mr. Williams has devoted more than a hundred pages of his book to a well-documented history of Warren's commands in the South African War. This section of the book will be of value to the future historian who may be able, after reading its pages to judge between Buller and Warren.

With reference to the relief of Ladysmith the author says, " The capture of Hlangwane by Warren's Division on the 19th—20th February brought to a close the first stage in the advance to Ladysmith, and also constituted the turning point of the campaign." He quotes Deneys Reitz, " Not only had Hlangwane been taken, but every Boer trench on the north bank (of the Tugela) for a distance of several miles had been evacuated..and there was a feeling of discouragement in the air that dismayed us." Lady White, quoted by the author, said, " Of course, my husband knew all along that it was really Sir Charles Warren who relieved Ladysmith." If we compare the character of the despondent Buller with that of the alert and energetic Warren, there can be little doubt in our minds as to who was to blame for previous failures in front of Ladysmith.

We may take one glimpse at a scene which has some interest for us at the present time. When it was a question as to whether the situation on Spion Kop, on the 24th January 1900, was critical or not, Warren wrote this note to Thorneycroft, " The General Officer Commanding would be glad to have your views of the situation and measures to be adopted, by Lt. Winston Churchill, who takes this note."

In 1899 and in later years, Warren spent some time in studying and writing upon the subject of ancient weights and measures. He published some of his speculations in the *Quarterly Statement* and in 1903 the Fund published his book on *The Ancient Cubit and Our Weights and Measures*. His ideas are not free from an element of mysticism, and, with regard to the supposed inter-relation of the various standards and units, it is well to be warned by the wise words of Sir Flinders Petrie, that there is nothing easier than to frame systems of plausible relations between measures. Warren had the curious notion that the Great Pyramid was placed " at a point in latitude N. where the seconds of arc of latitude and longitude were as 6 to 7."

Mr Williams quotes a letter from Warren in which the following remark occurs. " The electric light at my reading desk was so excessively strong that it quite upset me. I used to get fever through the eyes in very hot weather in Syria."

As bearing on this point, the present writer can remember hat Warren told him, in 1896, that once, when he was in Palestine, he thought that he was getting fever, and he hypnotized himself by staring fixedly at a boss in the ceiling, and so staved off the fever. When he was at Government House at Chatham he would sometimes tell of his experiences in Palestine thirty years before, and it was evident that he always looked back to those experiences with pleasure. It was there that he first came before the public as a man of ability and determination, and it is by his admirable work for the Fund, in those early years of its history, that he will be chiefly remembered by us.

Mr William's paints a very pleasant picture of Warren's old age, of the energy with which he took up the business of organizing and managing Church Lads' Brigades and Troops of Boy Scouts, and of the many activities which these included, such as rifle clubs, swimming clubs, gymnatic clubs, and bands. The author says that Westbere, near Canterbury, where Warren lived for some years, until 1924, " Became a Mecca for Scouts from Canterbury and Ramsgate." We find him taking much interest in his garden, writing for journals and speaking at meetings. "Altogether pretty busy," as the old man said.

He died on the 21st January, 1927, within a few days of the completion of his 87th year C.F. ARDEN-CLOSE.

Guide to Acre. By N. MAKHOULY. Government of Palestine, Department of Antiquities, Jerusalem. 150 mils : pp. viii -1- 108.

This is far more than a guide to Acre. It is an excellent little history, written by one obviously devoted to his subject and who knows it and has had the advantage of being able to refer to many little known works. There are few towns in Palestine that do not deserve a monograph and among those that do Acre stands high on the list. But the book is entitled *Guide to Acre*. And it is guide as well as history. Moreover it is, for its size, profusely illustrated by excellent photographs and reproductions of medieval plans and later views.

A.M.H.

The Committee have to acknowledge with thanks the following:

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An indexed Bibliography of the Writings of William Foxwell Albright, October, 1941.
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Ancient Jewish Coins, A. Reifenberg.
What Mean These Stones? Millar Burrows.

TRANSLITERATION OF HEBREW AND ARABIC CONSONANTS

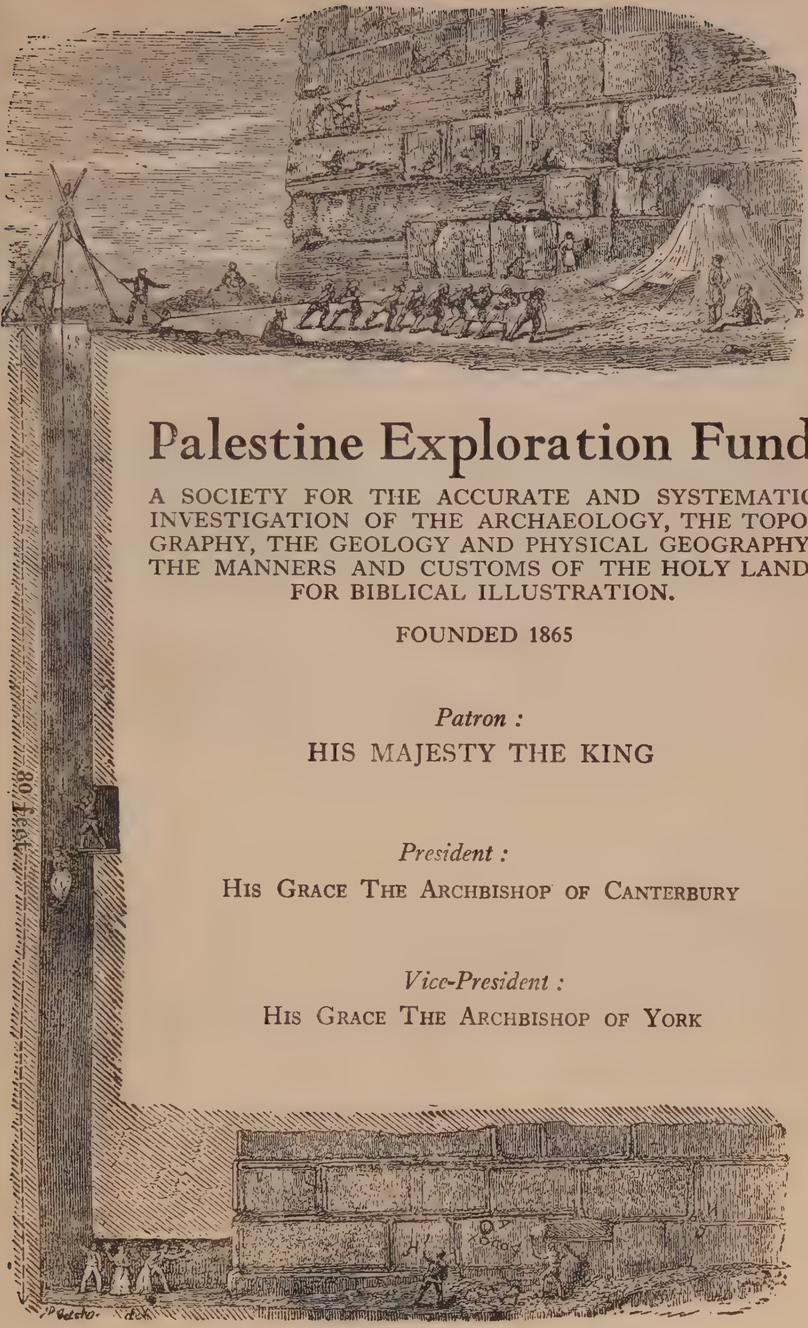
HEBREW

HEBREW	ENGLISH		HEBREW	ENGLISH	
א	'		כ	k̲h̲	
בּ	b		ל	l	
ב	b̲h̲		מ	m	
גּ	g		נ	n	
ג	g̲h̲		ס	s	
דּ	d		ע	'	
ד	d̲h̲		פּ	p	
ה	h		פ	f	
ו	v, w		צ	ẓ	
ז	z		ק	ḳ	
ח	ḥ		ר	r	
ט	ṭ		שׁ	s̲h̲	
י	y		שׂ	ṣ	
כּ	k		תּ	t	
			ת	t̲h̲	

ARABIC

ARABIC	ENGLISH		ARABIC	ENGLISH	
ا	'		ض	ḍ	
ب	b		ط	ṭ	
ت	t		ظ	t̲z̲	
ث	t̲h̲		ع	'	
ج	g	or j in Syrian Arabic.	غ	g̲h̲	
ح	ḥ		ف	f	
خ	k̲h̲		ق	ḳ	
د	d		ك	k	
ذ	d̲h̲		ل	l	
ر	r		م	m	
ز	z		ن	n	
س	s		ه	h	
ش	s̲h̲		و	w	
ص	ẓ		ي	y	

Long vowels marked thus :—ā, ē, ī, ō, ū



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THE
PALESTINE EXPLORATION FUND

NOTES AND NEWS

THE SEVENTY-SEVENTH ANNUAL GENERAL MEETING OF THE PALESTINE EXPLORATION FUND was held on Wednesday, 24th June, 1942, at 2 Hinde Street, London, W.1. Proceedings were of a business nature only and were presided over by Sir Charles Arden-Close, K.B.E., F.R.S., chairman of the Executive Committee. The annual report and accounts for the year 1941 were adopted. The officers and Executive Committee were re-elected, and Messrs. Turquand, Youngs, McAuliffe & Co., were re-appointed auditors for 1942.

The friends of Professor Emile Ryckmans of the Institut Orientaliste of the University of Louvain, the authority on South Arabian antiquity, will be pleased to learn that he is in good health and hard at work, apparently without interference. He is in his home in Louvain.

The death of Sir Flinders Petrie at a patriarchal age has deprived archaeology of its oldest and most distinguished representative. It seems fitting that the pioneer of scientific excavation in Egypt and Palestine should be gathered to his fathers in Jerusalem. Like Moses, his eye was not dim, nor his natural strength abated to the end. A memoir will appear in the next issue of this journal.

The *Journal of Egyptian Archaeology*, which, in journalistic usage, should be described as " our esteemed contemporary," has, in spite of coupons and war depression, appeared in new and splendid raiment. In form and printing it is a joy to the eye and a credit to the Oxford University Press. To celebrate the occasion the editor has graced it with a beautiful coloured frontispiece, a reproduction of Mrs. Brunton's lovely painting of Tut'ankhamūn's Gold Dagger. To the present writer's inexperienced eye the charming and realistic depiction of the hunting scene on the sheath at once suggested Minoan influence, but the editor, whose authority is unquestioned, says: "The present writer sees no reason to suspect Aegean influence."

Among many interesting contributions appear two valuable reviews by Mr. R. O. Faulkner, one of the late Professor K. Sethe's *Vom Bilde zum Buchstaben*, and the other of Professor Engberg's monograph *The Hyksos Reconsidered*. It is interesting to compare the second review with Professor Sidney Smith's review in the issue of this journal for April, 1940. In his review of Sethe's book, Mr. Faulkner refutes the view, accepted by several modern authorities, among whom is Dr. Diringer, that the Egyptians never had a true alphabet. Mr. Faulkner goes on to say: "What evidence there is strongly suggests that the inventor of the Sinaitic alphabet got the basic notion of an alphabet from Egypt and invented one to suit his own tongue, taking such Egyptian hieroglyphs as were suitable and adapting them to his own purpose; from this script there can be little doubt that the Phoenician alphabet was derived."

Another valued contemporary, the *American Journal of Semitic Languages and Literatures*, has also assumed a new incarnation, appearing in January, 1942, in a new and becoming dress, and with a new title, the *Journal of Near Eastern Studies*. In its earliest form, from 1884 to 1895, this journal was known as *Hebraica*. The reasons for a further change are thus expressed by the editors: "To-day there has arisen a situation similar to that which induced the change of name from *Hebraica*. Once again this *Journal* must take into consideration the ever-broadening background of biblical studies and the growing importance of near eastern studies in general. As before, Old Testament and biblical discussions will find their place in its pages. So, too, will articles on the other Semitic and non-semeitic languages and literatures, and on the archaeology and history of the Near East. In other words we intend to offer a forum for the scholarly treatment of any near eastern problem."

The new *Journal of Near Eastern Studies* fully maintains the high standard of its progenitor. A noteworthy article by Professor Olmstead, entitled " Could an Aramaic Gospel be Written," defends with great learning and skill the thesis put forward by Professor C. C. Torrey in his book *Our Translated Gospels*. English scholars in general have been very reluctant to admit the existence of Aramaic gospels, although the extent to which Semitic forms of thought and speech have influenced the Greek of our gospels is universally admitted. This article calls for the serious consideration of New Testament scholars.

Another interesting and important article is by Professor W. A. Irwin on *The Psalm of Habakkuk*, which discusses the relation of the psalm to the cosmic myths of the ancient Near East.

In the current issue (Vol. X, 2–3) of *The Quarterly of the Department of Antiquities in Palestine*, there is a valuable article by M. Avi-Yonah on *Oriental Elements in the Art of Palestine in the Roman and Byzantine Periods*. His thesis is the extent to which the native art of Palestine, though driven underground by the Hellenizing influences of Greek and Roman conquest, retained " its own blend of Hellenism with Canaanite decorative traditions." In the words of the author, " It is the aim of this article to follow the Oriental undercurrent in the Roman and Byzantine period from monuments in Palestine and Trans-Jordan : to indicate some of its connections with its Israelite and Canaanite predecessors, pursuing it backwards to its Babylonian, Assyrian, Hittite and Sumerian sources ; to show some of its relations with the contemporary Orientalizing art of Syria, Palmyra, Dura-Europos, and Parthia ; to search for the signs of its influence on the art of the succeeding Umayyad period. It is hoped thereby to contribute somewhat to the cultural and ethnic history of one of the most critical periods in the record of the Near East."

The brief and dry note which introduces the Notes and News in this issue conceals a meeting which was fraught with much anxiety for the future of the P.E.F. We would venture to repeat the appeal made in our last issue to all friends of the P.E.F. in this country and in the United States of America. To-day the resources of the individual are shrinking, and at the same time the demands for contributions to vital needs are daily increasing. Nevertheless, the work of the Palestine Exploration Fund represents an activity of the human spirit which is of profound and permanent value, and which no one with a true sense of spiritual values would willingly allow to perish. Hence we would once more appeal to all friends of the P.E.F. to remember this need, which might so easily be forgotten amid so many other pressing needs, and to contribute what they can to the support of the Fund through its present time of trial.

THE FOUR NORTH WALLS OF JERUSALEM

By WILLIAM ROSS

FEW questions, if any, in the archaeology of Palestine, have given rise to keener controversy, sometimes acrimonious, than the course of the three north walls of the ancient city of Jerusalem as outlined by Josephus (*Wars* V, IV, 2). To clear the way, I should state at once that after careful investigation on the spot, first under the guidance of the International Archaeological Congress of 1926, and ten years later, in the company of Mr. E. F. Beaumont, formerly city engineer of Jerusalem, I reached the sure conviction that the third of the three walls, the wall namely that was founded and partly-built by Herod Agrippa I (A.D. 40–44) ran in the course first discovered by Dr. Edward Robinson, just over a century ago, and described by him in his *Biblical Researches in Palestine*. This wall was rediscovered accidentally in 1925, and the greater part of its foundation was laid bare by Profs. Sukenik and L. A. Mayer of the Hebrew University in Jerusalem. These excavations extended from the Swedish School in the west to the American School of Oriental Research on the east, and are fully described in their finely illustrated volume, *The Third Wall of Jerusalem* (Jerusalem and Oxford University Press, 1930).

Prof. Sukenik's authority on this and on the kindred subject of the floors and foundations of ancient synagogues is second to none. In a letter which I received from him recently, he says that he is more completely convinced than ever, if that were possible, that this is the authentic third wall of Josephus. In a *Pilgrimage to Palestine*, published in 1928, Dr. H. F. Fosdick, discussing the site of Calvary, writes as follows: "Just now the debate has been fired with fresh fuel because the apparent line of the third wall has been exhumed approximately where, long ago, Dr. Robinson conjectured it to be. While we were in Jerusalem in 1926, a congress of archaeologists debated the question and left the matter . . . uncertain still. Since then Dr. Albright of the American School of Oriental Research has informed me that there is no longer any doubt that the new excavations have uncovered the third wall." The present writer is at a loss to understand how the authenticity of the third wall can be questioned, but it is still questioned, and that is the subject of this article.

Before proceeding further, however, one or two misapprehensions should be cleared away. There have been *four* north walls, if not more. The existing north wall which some have mistakenly identified with the line of Josephus' second north wall, and some, equally erroneously, with the line of the third, was built by Suleiman the Magnificent, and the date of its erection appears on the wall, namely, 1542. The remains of a previous wall, still visible near the Damascus Gate, shows that Suleiman's wall was superimposed on its foundations. History gives no clue to the date of the building of the earlier wall, but, in all probability, it was the north wall of Aelia Capitolina—the name given to Jerusalem when rebuilt by Publius Aelius Hadrianus (A.D. 117-138). The course of the present north wall, we cannot emphasize too much, is independent of that of any of the three walls mentioned by Josephus and gives no clue to them.

I regret to have to differ from several statements made by the Rev. S. L. Caiger in his useful volume *Archaeology and the New Testament*—two things particularly. Dealing with the claim that Robinson's wall is the third wall of Josephus, he proceeds: "On this theory, of course, the modern city wall must have been the true second wall, and the traditional second wall never existed at all." This is a mistake. The authenticity of Robinson's wall has no bearing whatever on the course of Josephus' second wall. I differ also from the following: "Accordingly, in spite of Mayer and Sukenik's discovery along Robinson's line in 1925, this theory of the walls has been generally abandoned, and the traditional identification prevails." This, also, is an error. For anyone who has followed the massive and unmistakable remains of a wall from the Swedish School to the American, a distance of 550 yards, there is no alternative but to agree with Dr. Albright: "There is no doubt that the new excavations have uncovered the third wall."

To study this subject intelligently one must do so with a map—G. A. Smith's, opposite page 241 of *Jerusalem*, Vol. I, or Wilson's sketch on p. 105 of *Golgotha and the Tomb*, or best of all for the rock-levels of the city Conder's shaded map, opposite p. 365 of *Tent Work in Palestine*. *Faute de mieux*, the sketch provided by the writer in Plate XI will be useful.

The First North Wall

The line of the first north wall as delineated by Josephus is undisputed. It began at Hippicus, the westmost of the three great towers built by Herod the Great, near what is now the Jaffa Gate. From that point the wall ran due east, skirting the south side of what is now David Street, parallel afterwards with and close to what is now the Harat Bab es-Silsileh, passing, in the days of the Roman Empire, the Xystus (the Open-air Gymnasium), and thence to the Council Chamber of the Temple.

This wall was defended on the north side by a deep natural moat, the Valley of the Tyropoeon. The term Tyropoeon, however, calls for elucidation, for it has been used very differently by topographers and cartographers of Jerusalem. Conder (*Tent-Work*, Vol I, p. 366) makes it to be a valley starting from the Jaffa Gate, running east and joining the central north and south depression opposite the Temple area. The valley from the Damascus Gate south-ward till it joins the Tyropoeon is, in his terminology, the Asmonean. Robinson's delineation of Tyropoeon is the same. Here also it starts from the Jaffa Gate, runs east between the traditional Sion (on the south-western hill), and the traditional Akra, the north-western hill (*Biblical Researches*, Vol. I, 385). It joins the valley from the Damascus Gate and debouches at the Pool of Siloam. In the map of Jerusalem in the *Encyc. Brit.* (14th ed.) the Tyropoeon is a hollow extending only from the south end of the Temple area, and running south to the Pool of Siloam. Present day writers and cartographers, however, visualize the Tyropoeon as starting north of the Damascus Gate, running south the whole length of the city and debouching at Siloam. The tributary valley from the Jaffa Gate, now filled up to a depth of seventy or eighty feet, is David Street, the main street of the city; but, in ancient times, it was a steep and narrow ravine, a strong natural defence to the north wall, giving it something of the impregnability of the walls that skirted the Kidron on the east and the valley of Hinnom on the west and south.

The Second North Wall

The city, however, grew, extending northwards, and a second rampart had to be built, the north wall of the days of our Lord, and known as the second north wall of Josephus. The only possible (but still disputed) Scripture reference to it is found in 2 Chron. xxxii, 5: "And he [Hezekiah] strengthened himself and built up the wall that was broken down, and raised it up to the towers, and *another wall without* [the second north wall] and repaired Millo, and the city of David." The course of this wall is the crux of topographical contention. The controversy has been sometimes acrimonious, because the authenticity of the site of the Holy Sepulchre depends upon it, and that authenticity, unfortunately, and to some minds unintelligibly, has become an article of faith, which must be regarded as sacrosanct and incontrovertible.

"Jesus suffered without the gate," but "the place was nigh unto the city." If then those are right in saying that the second north wall after passing the Pool of Hezekiah turned due east in such a manner as to leave the site of the Church of the Holy Sepulchre outside the wall, the traditional site of Calvary and the Resurrection might be authentic, but if, as many scholars believe, the course of this wall proceeded north, passing to the west of the site of the church, that site would then be within the wall, and could not be defended. The only evidence of this wall having followed a course which left the site of the church outside of it is some fragments of ancient masonry which some authorities claim to be remains of the wall. Konrad Schick, the eminent architect and archaeologist, discovered some of these fragments and contended that their presence was demonstration of the course of the second north wall; but Sir Charles

Wilson's comments on them show how far they are from being so. " Unfortunately," he writes, " Dr. Schick, whose accuracy as regards measurements is well known, rarely makes any distinction, whether in his writings, or in his drawings, between existing and assumed remains. He considered it necessary to identify everything that he found, and his enthusiasm frequently led him astray in his efforts to complete or to support some preconceived theory. This tendency is most marked in his attempts to define the course of the second wall and the ditch, and it is to be regretted that his views have been so widely accepted. There is no evidence that the isolated fragments of masonry, some of which differ widely in character and construction, *ever formed a continuous wall, and there is no certainty that any of them belonged to the second wall* " (italics mine). Archaeologists now recognize that species of stones, and styles of drafting and dressing of any one period mingle freely and frequently with those of antecedent and subsequent periods, and that identifications based on such evidence carry little weight.

If Josephus could have anticipated the controversies that his brief and disappointingly vague description of the second wall has given rise to, he would surely have given more attention to its delineation. One weighty comment on that delineation should be noted, namely that if Golgotha had stood there as a known spot in Jerusalem, Josephus, who names known spots adjoining other walls, would have named Golgotha in his description of the second wall, more especially if at this point the wall had turned at right angles to its previous line, as it must have done if the alleged site of the Church of the Holy Sepulchre were outside of it.

Josephus tells us three things about this wall, (a) that it began at the Castle of Antonia, (b) that it encircled the northern quarters of the city, and (c) that it ended at the Gate Gennath in the first north wall. The locus of the Gate Gennath is not defined, but, inferentially, we can determine very nearly where it stood. Our indicator is the *Birket el-Batrak*, known also as Hezekiah's Pool. Hezekiah, as we have seen, was in all probability the builder of the wall, and he was certainly the excavator of this large pool which he lined with flag stones.

This reservoir still exists, some eighty to one hundred yards north of the Tower of David, and, beyond question, it lay within the walls of the city. No king would have been so inept as to create a reservoir outside his city wall, an asset of tremendous advantage to the besiegers, but worse than useless to the besieged. The second wall, therefore, must have run along the west side of the Pool of Hezekiah, and that settles for us the locality of the Gate Gennath. It was a point in the first north wall near Phasaelus (David's Tower), or between that and its neighbour Hippicus.

Of the course of the second north wall after it passed the Pool of Hezekiah we know nothing, except that it " encircled the northern parts of the city." Ignorance, however, is the ideal soil for wishful thinking. The only theory acceptable to the traditional view of the site of the Holy Sepulchre is that the wall turned due east here, and then north, thus forming an indented angle and leaving the site outside the wall. Such a delineation, however, as Conder points out, does not tally well with that given by Josephus. The Greek word is κυκλούμενον literally " running in a circle." "The wall had no angles and, therefore, required no lengthy description" (Conder). It is possible, of course, to overstress this point, for a wall might have angles in it, and yet its general contour might be encircling. But further, and to my mind convincingly, a glance at Conder's rock-levels shows that the site of the Church of the Holy Sepulchre is high ground, namely, the north-west hill of Jerusalem, and it shows also that the terrain on the southern and eastern sides falls away steeply towards the central valley. If the site of the Holy Sepulchre lay outside the city, the wall must have run obliquely across this declivity, which from a military point of view is simply impossible, for the wall itself and the city within it would have been overlooked and commanded from higher ground outside. " No military man "—and it should be remembered that Col. Conder spoke with the authority of a Royal Engineer—" will suppose for a moment that the walls of a fortress could have been constructed in a deep valley, and commanded from high ground immediately near. . . . The military considerations seem to me to set the matter at rest, and to state the matter in a nutshell: fortresses stand on hills, not in deep ravines." That argument seems to me final.

The Third North Wall of Josephus

The terms in which Josephus describes the third north wall should be carefully noted: "The beginning of the third wall was at the tower Hippicus, whence it reached as far north as the north quarter of the city and the Tower Psephinus and then was so far extended till it came over against the monuments of Helena which Helena was the Queen of Adiabene, the daughter of Izates; it then extended further a great length, and passed by the sepulchral caverns of the kings, and bent again at the tower of the Fuller, and joined the old wall at the valley of the Kidron. It was Agrippa that compassed the parts added to the old city with this wall, which had been all naked before, for, as the city became more populous, it gradually crept beyond its old limits, and those parts of it that stood northward of the Temple and joined that hill which is number the fourth, and is called Bezetha, and caused it to be inhabited also." (*Wars*, V, IV, 2, Whiston's tr.) This wall, Josephus thinks, would have been impregnable, if it had been finished on the scale on which it was begun. "Its parts were connected by stones twenty cubits long and ten cubits broad, which could never have been undermined by iron tools or shaken by engines." Agrippa left the wall unfinished, because he came to know that Claudius Cæsar was seriously disturbed in mind over the erection of a wall of that strength as "portending some innovation in public affairs"—a diplomatic way of expressing a real, concrete fear. Thirty years later, on the approach of the Roman legions under Titus, the wall was rushed up to a height of twenty cubits, about thirty feet, above which were battlements and turrets, "the entire altitude extending to twenty-five cubits."

Here we touch the nerve centre of the controversy regarding the walls of ancient Jerusalem. Is the massive masonry discovered by Robinson, over a century ago and more fully exhumed by Sukenik and Mayer in 1925–6, the remains of Agrippa's Wall, or is it not? Some archæologists contend that the third north wall of Josephus ran very much in the line of the present north wall, which we have called the fourth north wall. The contour given by Josephus is irreconcilable with such a course. The north-west corner of the wall, according to this historian was a tower called Psephinus, the builder of which is nowhere named in history,[1] but in all likelihood it was built, or at least begun by Agrippa, in A.D. 41, when he founded the wall of which it was a part. To be able to locate Psephinus is to settle the question of the third wall. Josephus tells us two things about it, namely that it was an octagon, and that the view from the top of it was so extensive that Arabia could be seen and also the Sea (the Dead Sea obviously). If then, the course of Josephus' third wall were the same as that of the present north wall, which we call the fourth, the site of Psephinus, almost certainly, would be the *Qala'at el-Jalûd*, known also as "Goliath's Castle" and "Tancred's Tower." This tower has long since ceased to exist, but some of the piers of it are still visible in the cellars of the boys' School of the Frères Chrétiens. These piers have been carefully examined, and it is quite clear that the building upon them was *not* octagonal. The tower according to Josephus was seventy cubits high, but any glimpse of Arabia, even at this altitude is impossible from this point. The only point from which Arabia could be visible is the high ground to the north-west of the city, namely the Russian Compound, where Robinson, long ago, located the site of Psephinus, and from the top of whose buildings, one clear morning, Conder could distinguish the peaks of the mountains of Arabia.

This third wall, according to Josephus, was "so far extended till it came over against the monuments of Helena, Queen of Adiabene." Scholars agree that the Tomb of Helena is one of a series of rock-cut tombs, approached by a monumental staircase, and now known as the "Tombs of the Kings." These tombs are more than half a mile away from the present north wall. Robinson's measurement is 175 rods (about 942 yards). Is it likely that the course of a wall would be described as "over against these tombs" when it was more than half a mile away?

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[1] Sir G. A. Smith takes for granted that it was built by Herod the Great, but there is no authority for the statement.

Once more, "the wall extended to a great length and passed the sepulchral caverns of the kings." The words in the Greek original are δία τῶν σπηλαίων βασιλικῶν.[1] Writers who identify the course of the third wall of Josephus with that of the present north wall take it for granted that these "royal sepulchral caverns" are "Solomon's Quarries," known by the natives as the "Cotton" or "Linen Grottoes." They lie just within the present north wall, some 200 yards east of the Damascus Gate, and are entered by a door in the rock-base of the wall. That identification must be a mistake; for (1) these quarries were never used as places of burial; (2) the preposition in the Greek is δία which, as indicating place, never means "by" or "near," but "through," *i.e.* "entering at one end and emerging at the other," as Liddell and Scott define it—a definition which holds good for New Testament Greek as well as classical. No road passes, or could pass through Solomon's Quarries; there is no exit at the inner end. Such an exit may have existed in ancient days by which stones were transported to the Temple, but, if so, it led into the heart of the city, a course which is impossible for a wall, (3)[2] When Josephus names a definite object like the Akra or Bezetha, or Psephinus, the first letter is invariably a capital; when he names indefinite objects the initial letter is small. The oldest MSS of Josephus which we possess belong to the eleventh century, so we cannot be sure as to the letter he used in this connection, but when we find that in every edition of Josephus on which I have been able to lay hands, Greek, Latin, French, German, and English, the initial letters of the "royal sepulchral caverns" are small, the presumption is that they follow the original cursive MSS, and that the reference is not to some defined spot like Solomon's Quarries, but to some undefined area whose caverns were used for the burial of royal personages. A clue to that spot may be found in Jos., *Wars*, V, VIII, 2, where the historian informs us that

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[1] Whiston's translation of "sepulchral caverns" is more than doubtful. σπήλαιον occurs in the N.T. six times, but never in the sense of a sepulchre, but a cave, one of whose uses might be burial. John xi, 38.

[2] This third argument assumes a good deal and I do not lay much weight on it.

Titus caused the whole intervening space from Scopus to the monuments of Herod to be filled up. The words are μέχρι τῶν Ἡρώδου μνημείων. These monuments at the base of Scopus must have lain several hundred yards north-east of the present north wall. In further confirmation, the "royal sepulchral caverns," as a name for Solomon's Quarries, is not found anywhere else in Josephus or in any other early Greek writer, so far at least as I am aware.

The clinching argument, however, that the third north wall of Josephus, could not have run in the line of the present north wall, is that the foundations of the third wall have been laid bare several hundred yards north of it. In the spring of 1926 a congress of archaeologists met at Jerusalem and visited every excavation and centre of interest in Palestine, Syria, and Transjordan. Twelve months before, a profound sensation had been caused by the rediscovery of vestiges of what was believed to be the third north wall of Josephus. Prof. Sukenik tells the story of it in his admirable volume, "The Third Wall of Jerusalem."

To summarize briefly, the narrative runs as follows: In the course of road-repairs, in 1925, the workmen struck a large, drafted, and dressed block of stone, at the junction of two roads, several hundred yards north of Jerusalem, namely, the "Nablus Road," and the "Richard Cœur de Lion." This discovery opened the reservoir of previous controversies and out they poured. Some scholars had committed themselves to opinions which, if adhered to, made it impossible to admit the authenticity of the wall. The stone, they said, had no special significance. It indicated only the site of one of several quarries north of Jerusalem. Like the larger and better known blocks at Baal-bek and Assouan, it had been dressed and partly disengaged, but ultimately was left in the bed where it was found. Other scholars, however, of not less repute were convinced that the stone was one more of the cumulative evidences of the existence of a wall, traces of which had been discovered by Robinson nearly a century before. The Jewish Exploration Society was so impressed with the discovery that they resolved to explore the area between the Swedish School on the west and the American School on the east. Their work was immediately rewarding. Trenches were being dug for the foundation of a residence for a member of the Nashashibi family when the workmen struck a Byzantine mosaic, and two large dressed stones were laid bare. Close to this, on the west side and in line with discoveries already made, the first course of a massive wall was unearthed and also the foundations of a rectangular tower projecting northwards. A further stretch of wall was exhumed near the Nablus Road ; and still further east, due north of the Dominican Monastery, large dressed stones were found lying on wrought rock, in a line with those west of the road. All reasonable doubt of the existence of a massive wall had now been removed. In the two campaigns which followed in /26 and /27, the excavators found continuous ocular evidence of a wall fourteen feet wide and 550 yards in length. Adding the portion exhumed nearly a century before, the length of the wall from the Russian Buildings to the American School is over 5/8ths of a mile.[1]

" From the topographical point of view," writes Sukenik, " the line of this part of the wall is the most important for the protection of the city from the north. It stands on a ridge from which two valleys part, namely the Tyropoeon Valley and the western confluent to the Kidron Brook, the latter passing in front of Herod's Gate, and touching the north-eastern corner of the Temple area before merging into the Kidron. Anyone wanting to enclose the town with a wall from this side, could not have chosen a more suitable site than the line on which these remains were actually found."

Archæologists, however, differ amazingly, and this conclusion is vigorously contested by Père Vincent, the head of the greatly honoured Dominican School. His arguments on *La Troisième Enceinte*, in the *Revue Biblique* (1927 and 1928) are as follow : (1) " The masonry of the wall is poor and indicates great hurry, which does not harmonize with the days of wealth and prosperity characterizing the days of Agrippa." The answer to this is obvious, namely, that the wall in its latter stages immediately before the arrival of Titus was rushed up with feverish haste and any meagreness of masonry weighs more, in our view, in favour of its identification as the third wall than against it.

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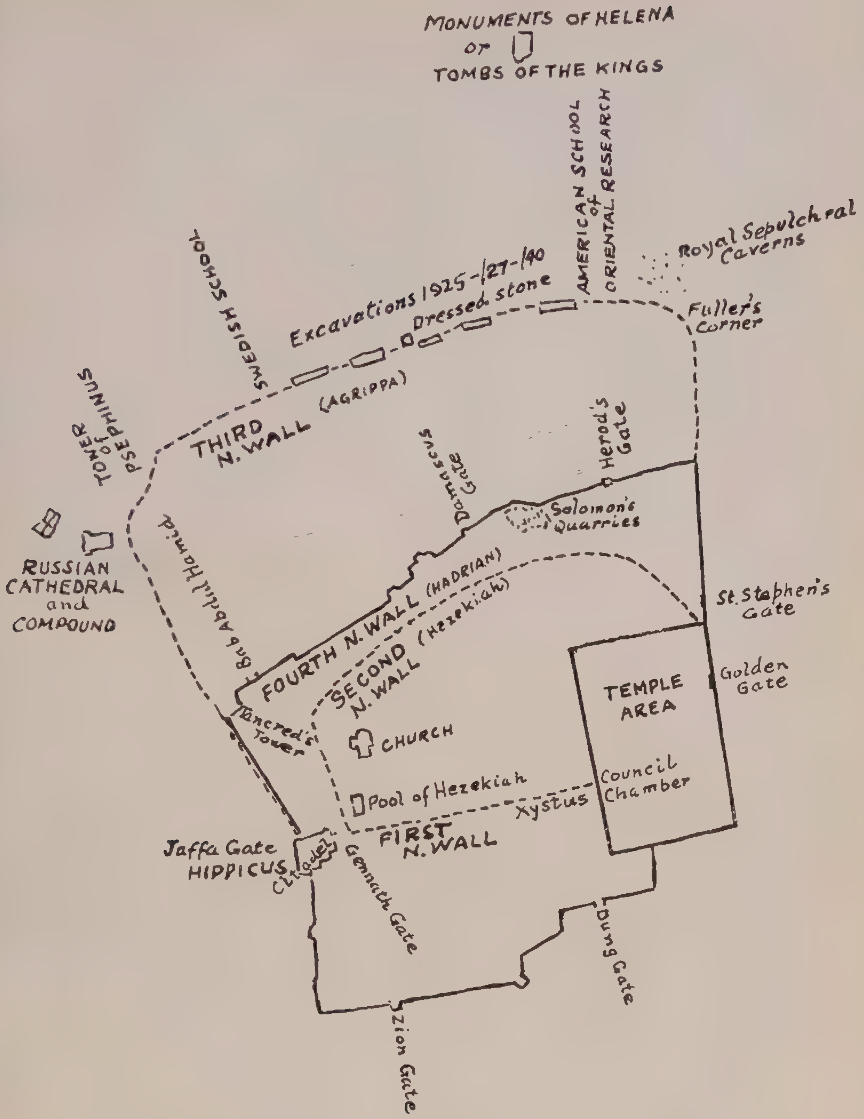
[1] Since then, in 1940, Prof. Sukenik and the late Dr. Fisher made excavations in the area at the eastern end of the wall, with the result that the total length of the Agrippan wall exhumed has been extended by nearly half a mile.

(2) The line of the wall, argues Vincent, is not that of an effective defence—regarding which one can only note with interest and perhaps amusement that Père Vincent and Prof. Sukenik, both of whom know the terrain perfectly, come to diametrically opposite conclusions. I also know the " lie of the land " from frequent inspections, and I cannot but agree with Prof. Sukenik.

What then is Père Vincent's interpretation of the continuous line of masonry that seems to indicate clearly the remains of a massive wall ? His opinion is, or was, when he wrote his article in the *Revue Biblique* and some years later when I had the pleasure of several hours of conversation with him, that the masonry now unearthed is the remains of a rough barricade thrown up at a later period in history, in Hadrian's reign, probably during the insurrection of Bar Kokhba, in the early years of the second century.

The closing pages of his article in the *Revue Biblique* (1928, pp. 337 ff.) are devoted to the interpretation of a few lines in the " Fragment of a Zadokite Book," in which Père Vincent suggests that this wall is referred to. The passages are highly metaphorical: " The dragons are the kings of the nations, and their wine is in their ways ; the head of asps is the head of the kings of Javan who come to take vengeance upon them. But on all these things they meditated not who builded the wall and daubed it with untempered mortar." The last clause, quite obviously, is a quotation from the parable of the " untempered mortar " in Ezekiel xiii, 10. To the ordinary reader these figurative indictments seem to have nothing to do with the building of an actual wall. Schechter, who translated the book, thought that they referred to the Pharisees, whom the author derides as builders of fences to protect the law. Scholars, moreover, differ widely as to the date of the " Fragment ; " some like Eduard Meyer and Gressmann putting it as early as the time of the Seleucids, and others like Margoliouth and Marmorstein placing it as late as


MONUMENTS OF HELENA
or
TOMBS OF THE KINGS
AMERICAN SCHOOL of ORIENTAL RESEARCH
Royal Sepulchral Caverns
Fuller's Corner
Excavations 1925-/27-/40
Dressed stone
SWEDISH SCHOOL
TOWER of PSEPHINUS
THIRD N. WALL (AGRIPPA)
RUSSIAN CATHEDRAL and COMPOUND
Bab Abdul Hamid
Damascus Gate
Herod's Gate
Solomon's Quarries
St. Stephen's Gate
FOURTH N. WALL (HADRIAN)
SECOND N. WALL (Hezekiah)
TEMPLE AREA
Golden Gate
Tancred's Tower
CHURCH
Pool of Hezekiah
Council Chamber
Xystus
FIRST N. WALL
Jaffa Gate
HIPPICUS
Citadel
Gennath Gate
Dung Gate
Zion Gate

THE FOUR NORTHERN WALLS
of
JERUSALEM

the seventh to the eleventh century A.D. (see *The Third Wall of Jerusalem*, p. 60).

More conclusively still, on the whole question, is the fact that when Hadrian came, about A.D. 120, to Jerusalem, he found only a few houses standing (Epiphanius, *de Mensuris* XIV, M). The implication of a wall being built several hundred yards north of the then existing wall would be that the city was growing rapidly or expected to do so. In Bar Kokhba's time that is unthinkable, but in the spacious days of Agrippa, that was the actual situation.

Since writing the above, the *Quarterly of the Department of Antiquities of Palestine* (Vol. X, No. 1) came into my hands—an issue that is wholly occupied with the results of excavations by R. W. Hamilton, Director of the Department of Antiquities, Palestine, on the present north wall and the vestiges of masonry on which it rests. With no ordinary pleasure I found that the conclusions to which I had come are fully confirmed. Summing up the results of excavations at several points in the present north wall, the writer came to the conclusion that " there is no evidence of a wall that could have belonged to any city earlier than Aelia Capitolina. The earliest important construction is to be seen in a city wall built, as far as can be judged, at some date between the foundation of Aelia and the late third or early fourth century A.D. The accumulations that preceded the building of the wall are mainly composed of first- or second-century material, but the presence of a few later sherds . . . leads us to conclude that the wall did not exist until the end of the third century."

One comment on this conclusion I would venture to make, namely, that it is extremely unlikely that Hadrian should have built Aelia Capitolina in the first quarter of the second century and have left it without a north wall, or alternatively that the north wall had to be built again a century and a half later than the city. My own conviction, in spite of the presence of sherds which might be otherwise explained is that the vestiges of foundations under and about the present north wall are the foundations of the north wall built by Hadrian.

THE EARLY HEBREW WEIGHTS FOUND AT LACHISH

By David Diringer

Exact weights and measures are among the most necessary items in the economic and judicial life of a nation.[1] This is also the opinion of the Hebrew legislator: " Ye shall do no unrighteousness in judgment, in meteyard, in weight, or in measure. Just balances, just weights, a just efah, and a just hin, shall ye have. . . ." (Lev. xix, 35 f.) " Thou shalt not have in thy bag divers weights, a great and a small. But thou shalt have a perfect and just weight, a perfect and just measure shalt thou have. . . ." (Deut. xxv, 13 ff.) " Divers weights, and divers measures, both of them alike are abomination to the Lord." (Prov. xx, 10.) " . . . a just weight is His delight." (*ibid.* xi, 1), etc.

The inscriptions or marks on weights are doubtless, more or less, a guarantee for the exactness of the weight. Hence the importance of the extant early Hebrew inscribed or marked weights, especially as few have been found. It is highly probable that the inscribed weights were standard weights, while in general unmarked weights were used. The number of the latter is relatively much greater.

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[1] Sir W. M. Flinders Petrie rightly points out (*Measures and Weights*, 1934, p. 5 ff.) the great importance of the extant ancient weights and measures: " . . . recently an excavator, who disregarded weights, said, ' We often find stones like that,' and there are many others who have never preserved or weighed them. Such workers have been throwing history away all the time." " The meaning of weights is generally overlooked. When noted in standards of coinage they are mentioned, but conclusions can hardly be reached without knowing their history in the previous ages." " Weights enable us to put a finger on the pulse of man's activities in each country in long ages past." " We realize from weights how civilization extended from 5000 B.C. over the widest span of the Old World, and we see how they testify to the community of culture. What weights are in revealing trade, measures are in revealing movements of peoples." " Thus measures and weights are the great revealers of the community of the world in trade and in population. We have from them a conception of human history and mental powers entirely different from that which the separate study of countries yields, and exceeding in range of time and space all that literature can tell us."

The fact that nearly all early Hebrew weights discovered (originally probably all early Hebrew weights) were of stone, makes it clear why the general word used in the Bible to denote weights was *abanīm*, " stones," and sometimes *abnē-kīs*, "bag-stones " (Mic. xvi, 11; Prov. xvi, 11, etc.). This expression illustrates the well-established custom in early Israel of carrying weights in a bag.

We publish here[1] a series of early Hebrew weights, found at Lachish by the Wellcome-Marston Archaeological Expedition to the Near East, and now to be seen at the Institute of Archaeology, University of London. Most of the weights belong to the pre-exilic period, probably to the end of the seventh and the beginning of the sixth century B.C. They are mostly of polished stone and are almost perfectly preserved. Some have a curious dome-shaped form, like a ball with a flattened base.

A certain number have their values marked upon them either in letters, numbers or other devices. As in the case of the other extant early Hebrew weights no definite system can be deduced from the weights found at Lachish. Nevertheless they are very important to Biblical archaeology and to metrology in general.

The Lachish weights fall into a series of groups, and inside the groups into a series of gradations, from large to small.

FIRST GROUP

Six Inscribed Weights

(Plate I, No. 1–6)

I—One weight inscribed נצף (*neṣef*). (Plate XII, No. 1.)

D7000. Form: irregularly dome-shaped, similar to Petrie,

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[1] I desire to express my gratitude to the Wellcome-Marston Expedition for permission to publish this material, to the Institute of Archaeology for its hospitality, to Miss Olga Tufnell and to Mr. Richard Barnett for their great assistance. My thanks are also due to Dr. F. E. Zeuner, who weighed all the weights and ascertained their material and colour.

Ancient Weights and Measures, 1926, P. V, No. 38. Approx. dimensions, in mm.: 14–16, maximum height, × 22, maximum width, × 16–19, diameter at the base. Pink limestone. Weight: 10.515 grammes.

Inscription: Nearly on the top are incised three letters: *nun*, *ṣade*, *pe*. The characters are quite similar to those of *Iscrizioni*, weight No. 2 (Tav. XXIII, 2), and unlike those of the other extant weights of this group. The rounded bases of the *nun* and of the *pe* are characteristic of the early Hebrew script. So also the squat form of the *ṣade*, which in general, is rather peculiar.

Notes: When the first examples of this kind were found, the word was read: *n-ṣ-g* (SAYCE, PETRIE, NEUBAUER, etc.), *n-z-f* (BLISS, MACALISTER), *n-ʿ-f* (MACALISTER), *k-s-f*, *i.e.* "silver" (CLERMONT-GANNEAU, LAGRANGE, RAFAELLI, etc.). The present inscription confirms that the reading of this word as *n-ṣ-f*, which all scholars now accept, is the correct one.

The meaning of the word is not certain. It may be called for convenience *neṣef*, the true vowels being unknown to us. "The name may perhaps appear in Egypt as the *nusa*, see P.S.B.A., 1892, p. 440" (Petrie, *op. cit.*, p. 15), but A. S. Hemmy is right when he points out (*An Analysis of the Petrie Collection of Egyptian Weights*, "The Journal of Egyptian Archaeology," XXIII/I, June, 1937, p. 55) that the early existence of the *neṣef* in Egypt must be considered very doubtful, and a late foreign introduction is a possibility. Sir Flinders Petrie writes: "It was rather more usual in S. Palestine than in Egypt, and equally before and after the Hyksos" (*Measures and Weights*, p. 19). "The NECEF is shown by the records of the weights of tribute from North Syria" (Petrie, *l.cit.*). At any rate, the metrological name *neṣef* is known only from early Hebrew weights. The expression does not occur in the Bible. In the Mishnah there is a word *niṣpah*, "caper," which seems to be a popular corruption of *ṣ-l-f*, "caper"; this flower-bud certainly does not weigh some 10 grammes, the weight of a *neṣef*. It is conceivable, although not probable, that the old form of the *neṣef* weights was similar to a caper, and might have originated the name of the standard.

Another, more probable, derivation has been suggested:

from the root, otherwise not in use, of the Arabic *nsf* (*nisf*, *nasf*, *nusf*), meaning " half," the name of a coin and a measure. It is known that some other names of early Hebrew weights and measures were originally but names of fractions: *beqa*' (see below), *shalish* (Isa. xl, 12; Ps. lxxx, 6) and *shelishit* (*Iscrizioni*, p. 281), *ḥomesh* (*Iscrizioni*, p. 282), etc.

Whatever the meaning of the word *neṣef* may be, it is clear that it is the name of a unity of weight, of which there also existed fractions, as one can see from the weight inscribed *reba*' *neṣef*, i.e. " 1/4 *neṣef* " (*Iscrizioni*, weight No. 10), now at the Ashmolean Museum, Oxford (1894, 42). It is unique amongst the inscribed early Hebrew weights for its spindle form, and weighs 2.54 grammes, giving us the unity (4 × 2.54) of 10.16 grammes. Besides this, ten other examples are known from Palestine bearing the name *neṣef*. Their weight is, in grammes (see *Iscrizioni*, pp. 264–271, and *P.E.F. Q.S.*, 1925, p. 107): 10.21, 10.105 (including the probable loss of 1.425 grammes), 10.044, 9.998, 9.946, 9.80, 9.76, 9.54, 9.447, 9.28.

Now the Lachish *neṣef*, of 10.515 grammes, is the heaviest known example, differing from the lightest specimen by the rather large amount of 1.235 grammes. How can this difference be explained? It is a mistake to assume the differences, as scholars generally do, to be variations of the average value, which would be 10.004 grammes for the *neṣef*, because this does not explain the weights which are heavier than the average. The eleven extant *neṣef* weights practically cover the whole scale between 10.515 and 9.28 grammes. As all these examples are of stone, their present weight probably represents their original weight unchanged.[1] There are two possible explanations of the differences in the weight:

(1) There were probably different local standards in early Hebrew Palestine as there are in Palestine to-day: they vary greatly throughout the country and are subject to considerable

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[1] " In most cases the stone weights have undergone no alteration, while old metal weights are nearly all so much attacked, that the alteration is serious: there has been gain by oxygen and carbonic acid, and loss by breaking away of the altered crust." (Petrie.)

fluctuations (see H. Luke—E. Keith-Roach, *The Handbook of Palestine and Transjordan*^{3}, 1934, p. 202).

(2) " . . . ancient balances did not conform to modern standards in accuracy and sensitiveness." " The assumption of inaccuracy, even considerable inaccuracy, in ancient balances is amply confirmed by the investigations of Mr. F. G. Skinner, of the Science Museum, London, who has studied this problem in several ancient balances in that institution. In one of his examples, a Graeco-Egyptian goldsmith's balance of about 600 B.C. requires about 3 per cent. of its load to turn, whilst the lengths of the arms differ by about 3 per cent. With such a balance an error in weighing of 6 per cent. either way is clearly possible." " Curiously enough, no evidence is apparent of systematic fraud, though we know from documentary evidence that such occurred." (A. S. Hemmy, *art. cit.*, pp. 39f.) See also the Biblical passages, mentioned at the beginning of this article.

For other particulars concerning the *neṣef* weights see *Iscrizioni*, pp. 264–273.

II—Two weights inscribed פים (*pym*). (Plate XII, No. 2–3.)

(1) D/X, No. 1505. Form : dome-shaped, similar to Petrie, *Ancient Weights and Measures*, P. V, No. 37. Approx. dimensions, in mm. : 16.5, maximum height, × 18, maximum width, × 12, diameter at the base. Pinkish-white limestone. Weight : 8.13 grammes. Plate I, No. 2.

Inscription : Three clear letters are incised on top : *pe*, *yod*, *mem*. They are unlike those of the other known examples of this group. The first, rather tall character, is nearly rectangular at the top. The engraver probably intended to make the base curved, but owing to the hardness of the stone did not succeed, and the shape is now rather irregular. The *yod* is also unusual : the lowest stroke is not parallel to the other two, but is oblique and forms a V with the main stem. While the *yod* is so near to the *pe* that they seem nearly to be connected, the *mem* is further from the *yod*. The *mem* is rounded at the base, as usual in early Hebrew writing, despite the material (though see *pe* above), but the two prongs of the head are not connected with the main stem, which is not very common, and are relatively long.

The reading of the three letters is agreed, but in some examples of this group, particularly *Iscrizioni*, weights No. 11 and 14, the form of the first letter is that of a *gimel* and not of a *pe*. Thus the word had been read *gym* by Lidzbarski and Barton, and Lidzbarski even proposed to consider the inscription *Iscrizioni*, No. 11—the only known at that time—as a forgery intended to make sport of the Gentiles (*g y m*=*goyim*= " Gentiles ") . . . . For the meaning of the inscription and the standard of this weight see below.

(2) D/X, No. 6157. Form : dome-shaped, a little more squat than the preceding weight. Dimensions, in mm. : 14.5, maximum height, × 18, maximum width, × 13.5, diameter at the base. Yellow limestone. Weight : 7.805 grammes. A very slight piece of the weight has been chipped away at the base. Plate XII, No. 3.

Inscription : On the top, three letters are incised, which are accurate and precise : *pe*, *yod*, *mem*. The characters are different from those on the preceding weight. The *pe* is in the characteristic early Hebrew form with a rounded base, similar to the *pe* of the Siloam inscription. The *yod* consists of a nearly vertical main stem, two parallel horizontal strokes, and a third lowest stroke, which is very oblique and goes from the base of the *yod* to near the head of the *pe*. The *mem* is also of characteristic shape : the head, as in the *mem* of *Iscrizioni*, weight No. 12, consists of two vertical prongs at the left top connected to the main stem by a horizontal stroke which runs not at the base but almost to the middle of the prongs ; the main stem is nearly vertical and slightly rounded at the base. The inscription is on the whole rather elegant.

Notes : The usual explanations given of the word *pym* are not sufficient. There appears to be a reference to this word in the passage 1 Sam. xiii, 21.[1] This passage confirms that the name of the weight was *pym*, but it does not explain it. There have been several attempts : Barton considered

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[1] Pointed out by Rafaelli and Segal (see E. J. Pilcher, *PEFQS*, 1916, pp. 77-85 ; see also *JPOS*, 1920, p. 22).

pym an abbreviation of (לְ)פִּי מִ(שְׁקָל)=“ according to the (standard) weight,” a most curious expression for a unit. Macalister thought originally that *pym* might be a third, and later he considered it “ probably a weight of three-eights of a shekel.” Another hypothesis of his was that *pym* was an abbreviation of פִּי־שְׁנַיִם meaning “ two parts ”=“ half a part ”=“ half.” More probable is Clermont-Ganneau’s hypothesis : that *pym* is an abbreviation of פִּי־שְׁנַיִם—*cf.*, particularly Zech. xiii, 8,—but *pym* is dual of *peh* (=“ mouth,” and also “ part,” “ fraction ”), meaning “ two parts,” “ two fractions,” “ two-thirds.” Clermont-Ganneau finds an analogy in Egyptian hieroglyphics, where the sign *r*=“ mouth,” sometimes meant “ a third.” Clermont-Ganneau’s two theories seem to be mutually exclusive. *Pym* would be thus “ two-thirds ” of a unit, probably of the *neṣef*. Nevertheless it is quite possible that the word *pym* was of foreign origin, hence is not to be explained in Hebrew at all. Whatever the facts, *pym* was the name of an early Hebrew weight standard.

Besides the two Lachish examples, four other early Hebrew weights exist inscribed *pym*. Their weights are, in grammes (see *Iscrizioni*, weights No. 11–14) : 7.65, 7.609, 7.269, 7.18. Curiously enough, the Lachish examples, like the example in the *neṣef* standard, are much heavier : 8.13 and 7.805 grammes. Thus, the heaviest is nearly one gramme more than the lightest example of the others. For possible reasons for the difference, see the *Notes* to the *neṣef* weight. The 7.609 grammes weight, being of metal, has probably gained, but the others, of stone, have maintained more or less their original weight.

The origin of this standard is obscure. A. S. Hemmy writes (*art. cit.*, p. 53) : “ There is evidence of a standard in the Peyem range, though only to a very minor degree, in the curve for Sumerian weights of the period of about 2000 B.C. . . . so it may have been introduced into Egypt from some intermediate place.” Petrie calls this standard “ Northern Peyem,” and considers it as a Palestinian unit, but assumes that it was known in Egypt at an early date, about the Vth dynasty.

III—Two weights inscribed בקע (*beqa*‘) and one weight marked with the letter *bet* (Plate XII, No. 4–6).

(1) D/X, No. 500. Form: dome-shaped. Approx. dimensions, in mm.: 14, maximum height, ×17, maximum width, × 15.5, diameter at the base. Pinkish-white limestone. Weight: 6.15 grammes. Very slightly damaged at the base. Plate XII, No. 4.

Inscription: On top, three letters are incised. They are neat, but irregular. The first is a squat and angular *bet*, although the engraver tried to round it at the base, and on the left side of the head. The second character is a beautiful but unusual *qof*: it consists of a vertical stem with a very oblong oval at the bottom, narrowing to the right, where it has also a tail. The ‘*ayin* is unusual, too: it is a squat and irregular oval. But on the whole, the inscription makes a very nice impression. For the meaning of the inscription and for the standard of this weight see below.

(2) L.12, No. 5349. Form: dome-shaped, but more regular and slender than the preceding one. Dimensions, in mm.: 15.5, maximum height, × 16, maximum width, × 13.5, diameter at the base. Pink limestone, harder than that of the preceding example. Weight: 6.095 grammes. Very slightly damaged at the base. The aspect of this weight is more elegant than those of all the other Lachish inscribed weights. Plate XII, No. 5.

Inscription: On the top of the weight three letters are incised: *bet*, *qof*, ‘*ayin*. The unusual tall *bet* is angular at the base, and nearly so at the head. The *qof*, like those of the Siloam inscription, consists of the main stem and the head, which is low at the left and rather high at the right. The first two letters are nearly connected, but they do not constitute a real ligature. The ‘*ayin*, incised nearly at the height of the heads of the *bet* and the *qof*, is extremely small and nearly triangular. This inscription is relatively slender (6 × 6 mm.), while the preceding one is rather squat (5.5 × 11.5 mm.). It may be added that all the *beqa*‘ inscriptions differ from each other, and all are more or less unusual.

(3) Form: dome-shaped, similar to a flattened ball. Approx. dimensions, in mm.: 15, maximum height, × 15.5, maximum width, × 8, diameter at the base. Hard pink limestone. Weight: 5.66 grammes. Plate XII, No. 6.

Inscription: On the top of the weight a letter, probably a *bet*, is scratched. The character is irregular, particularly the base and the head; there are also many scratches.

I presume that the *bet* is an abbreviation of *b-q-*‘, but this hypothesis presents a difficulty, in that the weight is lighter than all the other *beqa*‘*s*: 0.49 and 0.43 grammes less than the two preceding ones, and nearly 1 gramme less than the heaviest *beqa*‘ (*Iscrizioni*, weight No. 17), but only 0.14 grammes less than the lightest *beqa*‘ (*Iscrizioni*, weight No. 18). Nevertheless one cannot exclude the possibility that this example belongs to the *beqa*‘ class.

It is quite possible that owing to the hardness of the material, the engraver preferred to limit the inscription to one letter, especially after having so many difficulties with the scratching of the *bet*; and it is also possible that having scratched this letter too much towards the left, he was compelled to give up for lack of space.

Notes: The *beqa*‘ is the only weight known from the Bible, of which examples have survived. It is mentioned as the weight of the gold ring given by Abraham's servant to Rebekah (Gen. xxiv, 22), and is named as the poll tax ("a *beqa*‘ for every man," Exod. xxxviii, 26). The word *beqa*‘ derives from the root *b q* ‘ = "to split, to crack, to cleave, to divide," and means "part, section, half." Its metrological value was "half a sheqel after the sheqel of the sanctuary" (Exod. xxxviii, 26). The *beqa*‘ weight seems to be "the oldest standard in Egypt, being found in prehistoric graves of the Amratian period. . . . It was the usual weight for gold in Egypt, and the gold sign *nub* is found on it over the whole of the very wide range from /grains/ 189.7 (12.28 /grammes/) to 215.3 (13.90)." (Petrie.)

The early Hebrew *beqa*‘ standard weight is given by four other inscribed examples found in Palestine (*Iscrizioni*, weights No. 15–18, and Tav. XXIII, figs. 14–17) besides those found in Lachish. These four weigh respectively

6.65, 6.11, 5.8698, 5.8 grammes. The Lachish *beqa‘* No. 1 is amongst the heaviest of the Palestinian examples. The small loss of the Lachish weight brings it a little nearer to the highest one, but certainly not nearer to it than to the next one. The Lachish *beqa‘* No. 2 is nearly as heavy as the second-highest of the Palestinian weights; while the weight marked *bet* is, as said, 0.14 grammes lighter than the lightest of the others. For the variations in weight, see above on the differences in the *neṣef* standard.

On the whole, the Palestinian *beqa‘* is about half the Egyptian standard gold unit, which Petrie regards as the Egyptian *beqa‘*.

Although my chief purpose is to publish here weights from Lachish with early Hebrew inscriptions it is convenient to publish all the remaining Lachish weights. I add, therefore, two groups: (1) weights marked with numerical signs; (2) unmarked weights.

SECOND GROUP

Weights marked with Numerical Signs

(Plate XII, No. 7–10 and Plate XIII)

I—The ♉ -marked weights. (Plate XIII.)

(1) D/X, No. 6156. Form: dome-shaped. Approx. dimensions: 36, maximum height, × 40, maximum width, × 27, diameter at the base. Black and brown mottled limestone. Weight: 92.465 grammes. Plate XIII, No. 1.

Marks: On the top, two signs have been incised. The right mark has the form of an X with a stroke connecting the two intersecting lines at the base. The left sign, incised a little lower, has the shape of a T. The right one indicates probably the standard; the other, probably a numerical sign, seems to give the metrological value.

(2) L.14, Room 106, No. 6794. Form: dome-shaped. Approx. dimensions, in mm.: 35, maximum height, × 40, maximum width, × 31, diameter at the base. White limestone. Weight: 91.985 grammes. Slightly damaged. Plate XIII, No. 2.

Marks: Two signs have been incised on top: the right one is similar to that of the preceding weight, but is rounded at the base. The other has the shape of a circumflex (ʌ).

(3) Pal.E.W., No. 1491. Form: dome-shaped. Approx. dimensions, in mm.: 35.6, maximum height, × 40, maximum width, × 29–30, diameter at the base. Pink limestone, extremely nicely polished. Weight: 91.43 grammes. Very slightly damaged. Plate XIII, No. 3.

Marks: Similar to those of No. 1, but less regular, and the left sign has been incised a little higher than in the other weights.

(4) Pal.E.W., No. 1491. Form: dome-shaped. Approx. dimensions, in mm.: 35.7, maximum height, × 42, maximum width, × 27.5, diameter at the base. Yellow limestone. Weight: 91.115 grammes. Plate XIII, No. 4.

Marks: The same as in the preceding weight, but incised more roughly and more irregularly. The right mark is slightly rounded at the base; in the left sign only the right part of the horizontal stroke is preserved.

(5) Q. 12 c., No. 5261. Form: irregular dome-shaped. Approx. dimensions, in mm. 35.5, maximum height, × 39, maximum width, × 33, diameter at the base. Yellow limestone. Weight: 91.055 grammes. The execution is much more rough than that of the other examples. Plate XIII, No. 5.

Marks: The same as in the preceding weight, but the shape of the right mark is slightly different: the two intersecting strokes are connected at the base not by a stroke or curve, but by two tails which form an angle below, so that all the lower part of the sign has the shape of a nearly regular rhomboid.

(6) D/X, No. 1512. Form: a not quite regular dome. Approx. dimensions, in mm.: 30.5–34.5, maximum height, × 41, maximum width, × 29, diameter at the base. Dark grey limestone. Weight: 88.645. Plate XIII, No. 6.

Marks: Two signs incised on top. The right one is similar to that of the weight No. 2, but much bigger and more irregular. The left one, also rather big and irregular, is partly similar to that of weight No. 2, partly to a T, without the right part of the horizontal stroke, while the main stem has been irregularly prolonged above the horizontal stroke.

I add here another example, which, being unmarked, would belong to the next group, but having the same shape and a weight nearly identical with that of the preceding examples, may be included in this group.

(7) (Great shaft) P.Q. 17, No. 7240. Form: dome-shaped, partly not quite regular. Approx. dimensions, in mm.: 30.5–32.5, maximum height, × 40, maximum width, × 33, diameter at the base. Pink limestone. Weight: 87.735 grammes. Very slightly damaged.

Finally, there is a tiny weight with a very uncertain mark:

(8) D/500. Form: dome-shaped. Approx. dimensions, in mm.: 9.8–10.2, maximum height, × 14, maximum width, × 11, diameter at the base. White limestone. Weight: 3.12 grammes. Slightly damaged at the top.

Marks: On the top there are some slight traces of marks written with ink. Among some indecipherable signs, it seems possible to identify the mark ȣ, a little higher on the right than on the left. Above this mark, on the left hand there seems to be a small sign, similar to a circumflex (^), but upside down, of which only the right part is quite clear.

If our reading of the marks is correct, we have here probably a quarter of the unit ȣ. Thus, this unit would be of 12.48 grammes. This is a little heavier than the maximum unit of this standard, but as has been said, ancient weights are not too exact, especially the smaller ones.

Notes: Besides the Lachish examples, some fifteen other weights bearing the mark ȣ and the numerical sign have been found in Palestine (see *Iscrizioni*, weights, Fifth Group, pp. 284f., and Tav. XXIV, figs. 3–7). One example was found in Egypt (Petrie, *Ancient Weights and Measures*, p. 16, No. 5152, Pl. XIII).

(*a*) The two marks are, with some slight variations: a sign similar to the letter T, which is probably a number; and a sign similar to the Arabic numeral 8 without the top curve, which probably indicates the standard. As to the first mark, all scholars agree that it probably represents the number 8. But the significance of the ȣ sign is obscure. Two theories have been proposed by Petrie: (1) that the sign is the Greek γ, short for ουγκια, an ounce. This hypothesis Petrie afterwards abandoned, and it has not been accepted by any scholar; (2) that the mark is "a monogram of *kh* and *o*, presumably the beginning of a name *kho-*." (Petrie, *op. cit.*, p. 16.) According to Petrie, this will be an abbreviation of *Khoirīnē* (literally, a cowry-shell), which he thinks was a Persian standard. "The Khoirine standard is so named by me, as it is found in the form of a cowry shell, and is probably copied from actual shell used as weights." (Petrie, *Measures and Weights*, p. 19.) Petrie's second view is thus built up on a scaffolding of unproved assumptions, viz.:

(1) That our mark may be a monogram of *kh* and *o*.
(2) That it may be the beginning of a name *kho-*.
(3) That *kho-* may be the abbreviation of *khoirīnē*.
(4) That there existed a standard so named.
(5) That this name comes from a cowry-shell actually used as weights, etc. All these hypotheses are but mere suppositions, and none of them has been or can be proved. Their cumulative value as evidence of the facts is no greater when they are added together than when single.

(*b*) *The origin and the metrological value of the standard:* If the number-sign indicates "eight", the value of the unit will be in grammes: (1) 11.558, (2) 11.498, (3) 11.43, (4) 11.389, (5) 11.382, (6) 11.081 (we do not take into consideration No. 7=10.967–, and No. 8=12.48–). It is curious to note that like the Lachish weights belonging to the other standards, those belonging to this class are generally heavier than the weights found in other Palestinian places, which vary between 12.25 and 11.15 grammes (*Iscrizioni*, p. 285), but are usually nearer to the lower limit.

The origin of the ♉ -standard is obscure. Three views have been put forward:

(1) According to Thomsen ("Reallex.d.Vorgesch.," s.v. *Gewicht*, §7) it was derived from the Egyptian standard *nub* which, in the Saite period, had a value of about 12 grammes.

(2) According to Benzinger (*Hebräische Archäologie*,^{3} p. 196) it was derived from the Babylonian-Persian silver-sheqel of 10.91 grammes.

(3) According to Petrie (*Measures and Weights*, p. 19) " It was certainly of Persian origin, as 100 khoirines was the weight of the Persian *kapetis* of water." However, " The earliest of this standard are of the IVth dynasty, of 171.0 /grains/ and 175.4 /grains/, but these were not confused until the XXIIIrd dynasty." (Petrie.) This is badly expressed ; a Persian standard cannot have been in use during the IVth dynasty in Egypt ; but it is not impossible that a standard of Egyptian or Babylonian origin became later the Persian standard.

It is not possible within the limits of this article to find a solution to the problem, and this is not of great importance for our purpose. Although I disbelieve that the mark indicates the word *khoirīnē*, it is quite possible that as Petrie suggests the standard of our weights was exactly that of the Persian standard called by him " khoirine." But in this discussion of the Palestinian weights, it is wisest for the present to confine ourselves to the weights found there, and to observe merely that the standard of this class was probably the same as that of the inscribed Palestinian weight //למלך (*Iscrizioni*, pp. 280 f.), which gives us the unit as 11.14 grammes. This unit, called thus " the royal " (standard, sheqel), was approximately the double *beqa*ʻ.

II—Four weights with numerical signs only. (Plate XII, No. 7–10.)

(1) *One weight marked with a sign similar to the letter* T.

D/500. Form : dome-shaped. Approx. dimensions, in mm. : 12.5, maximum height, × 16.5, maximum width, × 15, diameter at the base. White limestone. Weight : 5.13 grammes. Plate XII, No. 9.

A *mark* has been scratched on top, composed of a horizontal stroke and a vertical one in the form of a T, but the strokes are not connected.

Notes : We have seen in the preceding group that T was probably a mark for the number 8, but it would have hardly this meaning here, because we cannot imagine the unit in question either (one-eighth of 5.13 grammes) 0.641 grammes, or (8 × 5.13) 41.04 grammes. Thus, the only hypothesis we can suggest is to disregard the mark and take into account the weight only. Or, do the two strokes indicate: "two parts, two fractions, a fraction divided in two, half?" At any rate, the most reasonable thing would be to consider the weight as half a *neṣef*, of 10.26 grammes, a quite suitable weight for a *neṣef*-unit. It is also possible to suggest the fraction two-thirds, which is very frequent in the early Hebrew weights; in this case, our weight could be two-thirds of a *pym* which would contain 7.695 grammes.

(2) *Two weights with the mark* √ √.

(*a*) H.18. Room 1085, No. 7124. Form: dome-shaped. Approx. dimensions, in mm.: 11, maximum height, × 14.5, maximum width, × 11.5, diameter at the base. Grey limestone. Weight: 3.82 grammes. Plate XII, No. 7.

Marks: On top, two signs scratched, in the form of hooks (height: 5.7 mm.). As the direction of the writing probably goes from right to left, I suppose that the signs are √ √ and not ∧ ∧. Other, less probable, suggestions: ⋜ or: ⋝ I do not believe that it might be a *zayin*.

(*b*) J.17, Room 1073. Form: nearly regular parallelepiped. Dimensions, in mm. of the faces: 13 × 12–12.5, 13 × 8, 12–12.5 × 8. Yellow limestone. Weight: 3.77 grammes. Plate XII, No. 8.

Marks: On one of the two larger faces two signs are scratched, nearly identical with those of the preceding weight, but less regular; height of the signs: 7.2 and 5.8 mm.

Notes: The marks and the nearly identical weight of both the examples (*a*) and (*b*), make it certain that both belong to the same standard and represent the same unit. It is also obvious that both are the same fractional weight, and it is certain, or at least highly probable, that the two scratched signs signify "two fractions." But are they "2/3" or "2/4" or "2/5," etc.? or else "two fractions"="a whole unit divisible into two fractions," i.e. (here) "a half?" In the latter case, the unit would be 7.64 and 7.54 grammes, thus probably a *pym*. If the sign ∧ indicates "1/3," the unit would be 5.73 and 5.655 grammes, probably a *beqa*ʻ, although a rather scarce one. And finally—being "2/4" (which would be one half), or "2/6" (= one-third), or "2/8" (= one quarter), or 2/7, 2/9, etc., highly improbable—our weights could be " 2/5 : " in this case, the unit of 9.55 and 9.425 grammes would be a *neṣef*. Petrie's hypothesis (*Ancient Weights and Measures*, p. 16, where he deals with another similar weight) that both of the signs indicate together " 1/3," is not very probable, but in this case too the unit could be a *neṣef*, although a very heavy one, 11.46 and 11.31 grammes, or rather the unit marked ɤ, which has already been discussed. There are perhaps some other possibilities, but those just mentioned are more than sufficient to indicate how difficult is the solution of the problem. I myself prefer the hypothesis " 2/3," in view of the passage already mentioned (Zech. xiii, 8), and of the fact that the fraction two-thirds was a common one.

N.B. Another example (D/X, No. 7254, dome-shaped) is now in the Palestine Museum, Jerusalem.

(3) *One weight marked / /.*

D/X. Form : nearly regular parallelepiped. Dimensions, in mm. : 9.5 × 9.5 × 7. White limestone. Weight : 1.705 grammes. Plate XII, No. 10.

Marks : two strokes—height : 3 mm. and 3.8 mm.—incised on one of the larger faces.

Notes : The meaning of the strokes is obviously " two," i.e., " two parts, two fractions," " a whole unit divisible into two fractions "=" a half." Thus, the unit would be 3.41 grammes, or half a *beqa*ʿ. Did the half *beqa*ʿ become at one time a unit capable of being divided into fractions ? Or did the *beqa*ʿ consist of two standards, the heavy one and the light one (the light one=half of the heavy one) ? There may yet be perhaps some other explanation.

Third Group

Thirty-one Unmarked Weights

It is not within the limits of this article to examine the unmarked weights in all particulars. But it will be useful to mention them. I shall try to assign them tentatively—including the multiple and the fractional ones—to the different standards used in early Hebrew Palestine and known from the inscribed or marked weights found in Palestine itself. It should be confessed that these standards are very uncertain. In each Palestinian standard there is so much variation between the different examples, that the standards form a continuous overlapping series. A similar situation is found in the Egyptian weights of which Petrie remarks: "Such a situation might seem to reduce the subject to a mere arbitrary assignment of any object to some standard, and even raise the question whether there were any definite standards. The subject is, however, cleared so soon as we reach the lower multiples."

(1) D/7000. Form: oblong, irregular solid; nearly all the edges have been rounded in order to prevent chipping. Approx. dimensions, in mm.: 61, maximum length, × 24.8–30.5, width, × 22.5–24, height. Grey limestone. Weight: 88.48 grammes. Metrological value: 8 "royal" sheqels, or ♉ -marked units.

(2) D/7000. Form: irregular cone with a rounded vertex. Dimensions, in mm.: 35, maximum height, × about 17, diameter at the vertex, × 40, diameter at the base. Grey dolerite. Weight: 75.74 grammes. Metrological value: 8 *neṣef*.

Note: It is uncertain whether this object was a weight.

(3) J.15 1039. Form: a variety of the oblong form called by Petrie "pillow-form," with all the edges rounded. The base is flat, while the top is slightly convex. Dimensions, in mm.: 43.5, maximum length, × 32, maximum width, × 17.5–22.5, height. Dark grey limestone. Weight: 57.155 grammes. Metrological value: 5 "royal" sheqels or ♉-marked units.

(4) J.17. Room 1017, No. 6227. Form: nearly a half (broken perhaps already in ancient times) of a dome. Approx. dimensions, in mm.: 36.5, maximum height, × 40, maximum width, × 24.5, diameter at the base. Blackish-brown limestone. Actual weight: 49.355 grammes. Metrological value uncertain, as it is unknown whether this object was used as a weight when still entire, and if so what was the original exact weight. However, it might belong to the above Group II/I.

(5) D/X, No. 6158. Form: domed-top. Dimensions, in mm.: 18, maximum height, × 33.5, maximum width, × 25.5,

diameter at the base. White barytes. Weight: 48.03 grammes. Metrological value: 5 *neṣef*.

(6) D/X. Form: cylinder, irregularly shaped. Dimensions, in mm.: 23–25, height, × 24–28, diameter. Light grey limestone. Weight: 47.27 grammes. Metrological value: 5 *neṣef*.

(7) D/X. Form; barrel or spindle-form, flattened on the base and on both the ends. This form is probably Syrian in origin, as has been pointed out by Petrie. The present example is a masterpiece. Dimensions, in mm.: 36.2, maximum length, × 35.2, major axis of the base, × 9.5, approximate diameter at both the ends, which are rather irregular, × 20, minor axis of the base, × 18.2, maximum height, × 23, maximum width. Black haematite. Weight: 46.28 grammes. Very slightly damaged at the base. Metrological value: 5 *neṣef*.

Notes: It is worthy of notice that the only inscribed early Hebrew spindle-shaped weight is a quarter of a *neṣef* (*Iscrizioni*, weight No. 10); of the two unmarked examples, No. 18 below certainly, and No. 20 possibly, represent a single *neṣef*.

(8) H.14. Room 1002, No. 5447. Form: dome-shaped. Dimensions, in mm.: 21.5, maximum height, × 30.7, maximum width, × 29, diameter at the base. White barytes. Weight: 45.365 grammes. Very slightly damaged at the base. Metrological value: four " royal " sheqels or ♉ -units.

(9) D/X. Form: dome-shaped; the base is not very well flattened. Dimensions, in mm.: 31, maximum height, × 31, maximum width, × circa 15, diameter at the base. White limestone. Weight: 44.34 grammes. The state of preservation of the weight is not very good at the base. Metrological value: similar to that of the preceding weight.

(10) G/18.32, No. 6354. Form: dome-shaped. Dimensions, in mm.: 26.7, maximum height, × 31.5, maximum width, × 21, diameter at the base. White limestone. Weight: 42.64 grammes. Metrological value: four *neṣef*.

(11) D/7000. Form: not quite regular cylinder. Dimensions, in mm.: 24–27, height, × 21, diameter at the base, which is more flattened than the top, × 18, diameter at

the top. Dark brown haematite. Weight: 41.97 grammes. Condition: not very good. Metrological value: four *neṣef* (?).

(12) H.14. Room 1002. Form: very irregularly spherical, slightly flattened at the base. Dimensions, in mm.: 24–29, diameter. Brownish-black limonite. Weight: 33.75 grammes. Metrological value: three "royal" sheqels or ♉ -units.

Notes: It is doubtful whether this object was a weight.

(13) D/X. Form: rather an irregular dome or cone, the base flattened and polished very nicely, the top partly flattened. Dimensions, in mm.: 20–22 height, × 29, diameter at the base, × 18, diameter at the top, which is very irregular. White limestone. Weight: 29.98 grammes. State of preservation: uncertain. Metrological value: three *neṣef*.

(14) D/X. Form: oblong, irregular solid; the edges rounded in order to prevent chipping; the base is better flattened than the top. Dimensions, in mm.: 36, maximum length, × 20.5, maximum width, × 17, maximum height. Pink and white mottled limestone. Weight: 25.345 grammes. Metrological value: four *beqa*ʿ.

(15) D/X. Form: very rough, perhaps intended to be barrel-shaped, with a flattened base, but, owing to the hardness of the material, the shape is very irregular. Dimensions, in mm.: 29, maximum length, × 21, maximum width, × 17.5, maximum height. Brownish-black limonite. Weight: 22.95 grammes. Metrological value: three *pym*.

(16) D/X. Form: dome-shaped. Dimensions, in mm.: 20, maximum height, × 22.2, maximum width, × 18, diameter at the base. Brownish-black limonite. Weight: 22.856 grammes. Metrological value: three *pym*.

17) D/X. Form: barrel, very roughly made, owing probably to the hardness of the material. Dimensions, in mm.: 24, maximum length, × 20, maximum width, × 15, diameter at one end, × 12, diameter at the other end. Brownish-black limonite. Weight: 19.53 grammes. Metrological value: 2 *neṣef*.

(18) D/X. Form: spindle-shaped, flattened on one side. Perfect execution and condition. Material, form and execution as in the above weight No. 7. Dimensions, in mm.: 29, maximum length, × 12, maximum width, × 10, maximum height; base: 18 × 7, major and minor axes of the oval;

diameter at the two ends: about 3.5. Black haematite. Weight: 9.69 grammes. Metrological value: one *neṣef*. See note to No. 7 above.

(19) D/X. Form: irregular dome or cylinder. Dimensions, in mm.: 7.5–11, height, × about 16.5, diameter at the base, × 14.8–15.2, diameter at the top, which is very irregularly shaped. Light grey limestone. Weight: 8.975 grammes. Metrological value: one light *neṣef* or one heavy *pym*.

(20) D/X. Form: spindle-shaped, very nicely polished. Dimensions, in mm.: 24, actual maximum length, × 14, maximum width, × 11, maximum height; base: 17.3 × 10, major and minor axes of the oval; diameter at the preserved end: 5. Black to brownish-black haematite. Weight: 7.87 grammes. One end slightly damaged, the other chipped off. Metrological value: if the loss is small, one *pym*; otherwise it may be a *neṣef*, in a lighter standard: see also note to No. 7 above.

(21) Pit 219, No. 4876. Form: irregular dome. Dimensions, in mm.: 12.5, maximum height, × 19, maximum width, × 13–16, diameter at the base, which is very irregular. Grey limestone. Weight: 6.135 grammes. Metrological value: one *beqa'*.

(22) F7. Form: spindle-shaped, flattened at the base. Dimensions, in mm.: 32, maximum length and major axis of the base-oval, × 11.5, maximum width and minor axis of the base-oval, × 7, maximum height, × 4 and 2.5, heights at the two ends. Reddish-black haematite, very nicely polished. Weight 5.87 grammes. Slightly chipped at the top. Metrological value: one *beqa'*.

(23) D/X. Form: irregularly dome-shaped. Dimensions, in mm.: 11, maximum height, × 16, maximum width, × 13, diameter at the base. White barytes. Weight: 5.45 grammes. Metrological value: one-half *neṣef*.

(24) D/X. Duck-form, like the Egyptian duck-shaped weights.[1] Dimensions, in mm.: 20.5, maximum length, 14.6, maximum width, × 11, maximum height, × 11, diameter at

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[1] The duck-shaped weights were common in Mesopotamia and in Egypt, but the Egyptian examples were generally without the head: they were more like eggs, with a pointed end, flattened below to prevent rolling.

the base. Green and grey mottled serpentine. Weight : 4.58 grammes. Metrological value : one-half *neṣef*.

(25) L.13. Form : irregularly cylindrical, with a flattened base. Dimensions, in mm. : 16.8, maximum length, × 9.8, maximum width, × about 5.5, diameter at the base. Reddish-brown limonite. Weight : 3.55 grammes. Metrological value : one-half *pym*.

(26) L.14. Room 65–6, No. 6398. Form : cylinder with flattened base and domed top. Dimensions, in mm. : 11.8, maximum height, × 13.2–14.2, diameter of the roll, × about 11.8, diameter at the base, × 6.8–9.0, height of the roll. Dark grey limestone. Weight : 3.38 grammes. Metrological value : one-half *beqa*ʿ.

(27) D/X. Form : dome-shaped, very well made and polished. Dimensions, in mm. : 9, maximum height, × 11.2, maximum width, × 9.5, diameter at the base. Black haematite. Weight : 3.185 grammes. Metrological value : one-half *beqa*ʿ.

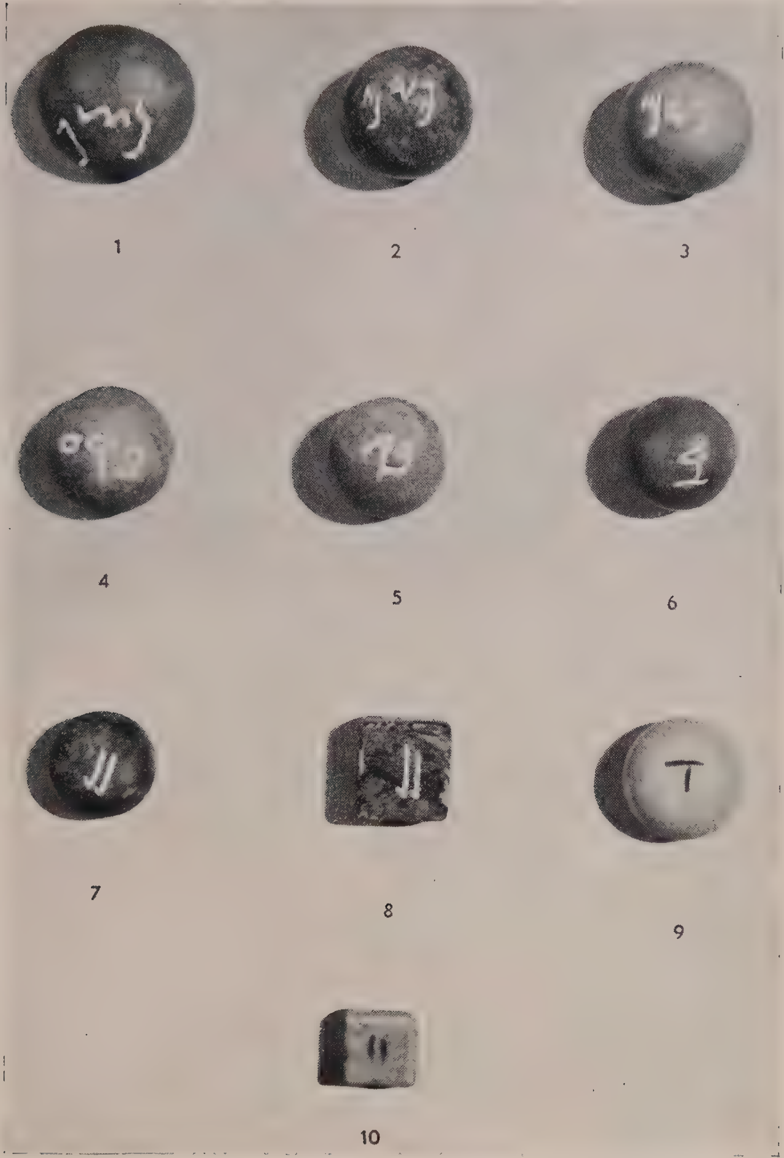
(28) D/X. Form and execution as in the preceding one, but still better polished. Dimensions, in mm. : 8, maximum height, × 9, maximum width, × 7, diameter at the base. Black haematite. Weight : 1.445 grammes. Metrological value : one-quarter *beqa*ʿ (rather scarce).

(29) D/7000. Form : nearly cylindrical, flattened at the base and domed at the top. Dimensions, in mm. : 7.9, maximum height, × 10.2, maximum width (at the top), × 8.2, diameter at the base. Grey limestone. Weight : 1.33 grammes. Metrological value : one-fifth *beqa*ʿ.

(30) and (31). The two weights, D/X, lead, certainly, and D/X (Great Shaft), No. 7241, haematite, spindle-shaped, probably, belong to a later period, so need not be taken into account here.

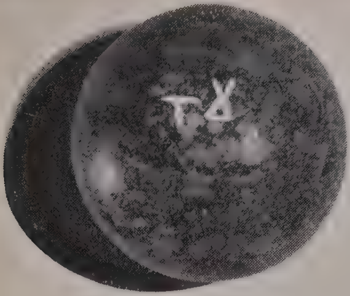
Some General Remarks

A few words about the date of the Lachish weights. In many cases this point cannot be solved, owing to the fact that the examples, marked D/X, D/500 and D/7000, were found on the surface of the ground, so they may belong to any age. In some other cases, the finding place gives us only the post quem date. Six examples—as Miss Olga Tufnell told



NOS. 1—6, INSCRIBED WEIGHTS FOUND AT LACHISH

NOS. 7—10, LACHISH WEIGHTS MARKED WITH NUMERICAL SIGNS



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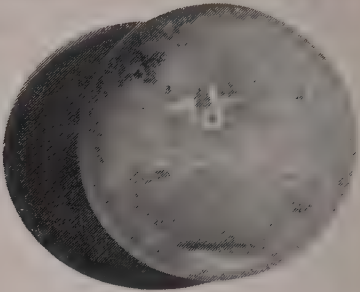

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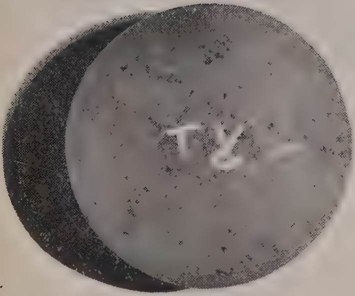

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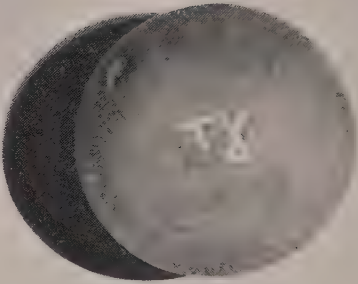

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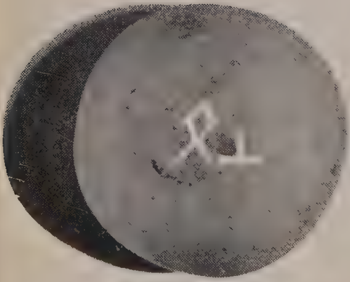

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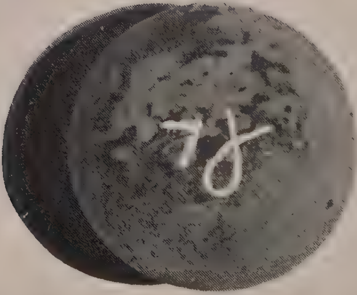


6

LACHISH WEIGHTS MARKED WITH NUMERICAL SIGNS me—were found in the rooms associated with the preexilic city, and their presence corroborates the general view of their date. One was found in the filling of a Persian grain pit and another in the debris blocking the great shaft, but they can have easily have come there by the general movement of debris from any level. Only one was found in an unrobbed tomb below the N.W. corner of the mound and unfortunately the groups with which it was associated, though chiefly Middle Iron, contained intrusions also. It should be added that, since weights are easily transportable, it is naturally not certain that all examples discussed here are early Hebrew or Palestinian, except those bearing early Hebrew inscriptions. Even in their case their exact date remains uncertain, and it is possible, though not probable, that some examples may be post-exilic. The ♉ -marked weights have been generally considered to belong to the Persian or Hellenistic period, but neither can this be affirmed with certainty.

The inscribed weights are of great interest from the epigraphical point of view.

It is noteworthy that the smallest fractions, which are unfortunately unmarked, belong to the *beqa*‘ standard, that used for gold-weighing.

Addendum to my Article on Ancient Hebrew Inscriptions discovered at Tell Ed-Duweir (Lachish), *PEQ*, 1941, pp. 38–56, 89–109.

Add to (1) *Stamps on jar-handles.* (*a*) *Private Stamps.* Six stamped jar-handles (K 14/J14) have been acquired by Mr. H. Dunscombe Colt (New York, U.S.A.).

(*c*) *Royal Stamps.*

Six stamped jar handles *Hebron*, marked K 14/J14 A.G., and six marked D/X; three stamped jar-handles *Sokoh*, marked K 14/J 14 A.G., and two marked D/X; three stamped jar-handles (D/X) with doubtful place-name, have been acquired by Mr. H. Dunscombe Colt.

Besides, there have been left out four stamped jar-handles (D/Great Shaft, P. 17): One Hebron, Group II; two Sokoh, Group II; one with doubtful place-name, Group III.

Thus, thirty stamps must be added to the total.

THE DATES OF THE GEZER TABLET AND OF THE SAMARIA OSTRACA

By S. Birnbaum

1. *The Gezer Tablet*

The Gezer Tablet cannot be dated from archaeological evidence. Let us see what aid towards determining its age can be derived from palaeography. There has been considerable deviation in the results arrived at by epigraphists on this score—the dates ranging from the eleventh century to about 900. This is not surprising since the material available for comparison is only very scanty. The following lines are an attempt, through a new, detailed comparison in the course of which a few recent finds have been utilized, once more to tackle the problem of their date.

The documents we shall utilize are: the Byblos inscriptions of Ahiram (A; early eleventh century) and of Abibaal and Elibaal (AE; middle and second half of the tenth century), the Samaria Ivories (SI; first half of the ninth century), the Arslan Tash Ivories (AT; middle of the ninth century) and the Mesa Stele (M; about 850).

Aleph. In A, the oblique strokes, though converging, stop at the vertical and do not meet; they are curved. In the later inscriptions, they cross the vertical and meet; they are straight; the main stroke is longer than in A, and these characteristics are to be found also in G [=our Gezer tablet], where, too, the angle of the cross strokes is much more obtuse than in M.

Daleth. In AE, the right side is vertical; in the later inscriptions and also in G, the right side is slanting. In AE and M, neither of the sides is produced downwards, which is also the case in G but not in SI and AT.

Waw. In A, the top part consists of a semi-circle; in SI, one example of it is still wide, both halves having nearly turned into straight lines; in M, the top is similar but narrower, which is also sometimes the case in G, where, too, there are forms with straight lines. Only in A does the downstroke turn left.

Zayin. In A, the two horizontals are small, in SI and AT they are long. The connecting stroke is usually vertical, but in SI a slanting one also occurs and it is this form which we find in G.

Heth. G agrees with A, SI and AT as against M, where the right hand vertical is prolonged downward.

Yodh. In A, the letter is a wide curve, halved by a short horizontal, and has a horizontal base; in AE, the top is nearly angular, SI, AT and M it is completely so. The middle stroke is usually nearer the top stroke; both features are characteristic for G, too. The base is horizontal, as in A, in AE and AT; it slants upwards in SI and M; G has both upward and downward slants.

Kaph. In A and AE, all three strokes are of equal length, in AT the middle stroke, in M the right hand stroke is lengthened downwards. G agrees with M.

Lamedh. In A, the long stroke is slightly curved, in M, it is strongly curved; in AT, it is straight; the latter is also the case in G. The angle at the bottom is rather obtuse in A, but is acute in AT, as also in G.

Mem. In A, the lowest stroke is of the same length as the others, being just one line of the zig-zag. In the other inscriptions it is prolonged downward and this too, is the case in G. The downstroke is straight in G but in AT, there is besides this form, one whose end bends to the left, as in M.
PE in A, is practically crescent shaped, the upper part being just slightly less curved than the lower; in SI, the curve is broken; in M, the top is angular; G has the same feature but the left stroke of the angle is curved, whereas it is straight in M.

Sadhe and Qoph in G are as in AE and M.

Looking through these notes, we find that the difference between G and A is very marked: as many as about half of the letters of the alphabet have had to be discussed. Hence, the early part of the eleventh century seems to be out of the question for G. Aleph, Mem, Sadhe and Qoph would suggest that G cannot be older than the middle of the tenth century ; Daleth, Zayin, Yodh and Mem, that it is not older, than the first half of the ninth century ; Waw, Kaph, Lamedh and Pe would seem to bring it down to the middle of this century. Looking now for characteristics pointing to a terminus ante quem, we come upon features of Aleph, Daleth Heth and Mem which we no longer meet with after the middle of the ninth century. Thus our two lines of delimitation meet at this same date.

For the sake of convenience we might tabulate the results of our comparison as follows. When some characteristic of a letter points to a definite chronological relation between G and the other inscriptions, we shall indicate this by putting the approximate date of the inscription in question with a dash either before or after, e.g., " Yodh 875- " means : " The particular detail or characteristic of Yodh in the Gezer Tablet corresponds to that of the Yodh in the Samaria Ivories, it is younger than the forms of the Ahiram Sarcophagus and the Abibaal and Elibaal inscriptions ; it therefore, suggests a date for the Gezer Tablet not before or not much before the first half of the ninth century."

(937—AE, 875—SI, 850—AT, 850*—M.)

Aleph	937–	–850*
Daleth	875–	–850*
Waw	850*–	
Zayin	875–	
Heth		850*
Yodh	875–	
Kaph	850*–	
Lamedh	850– 850–	
Mem	937–	–850
Pe	850*–	
Sadhe	937–	
Qoph	937–	

The latest date on the left side and the earliest date on the right side indicate the period in which the Gezer Tablet was written. These are identical and give the middle of the ninth century.

2. *The Samaria Ostraca.*

We did not include the Samaria Ostraca in our comparison for two reasons. Firstly, because their date is too uncertain. For the archaeological evidence bearing on their date offers us four possible periods: that of Ahab (867–854), of Jehu (842–815), Jehoahaz (814–798) or Jeroboam II (783–743). By utilising the Ostraca we should be trying to find the x of Gezer by means of the y of Samaria. Secondly, if possible, it is of course, preferable to avoid comparison between inscription style and handwriting.

The position is, however, different when attempting to date the Ostraca. No handwritten material near their period is available for comparison, and so we have no alternative but to make use of inscriptions. There are, in all, not more than two inscriptions we can utilise. But they have the advantage of standing at the beginning and at the end of the period in question: the Mesa Stele and the Siloam inscription (Si; of about 700). Are the forms of the Samaria Ostraca (S) nearer M or nearer Si?

Aleph. The cross strokes of S are almost parallel, as in Si, but, on the other hand, they meet as in M.

He. S resembles Si more than M.

Waw. S and Si are identical as against M.

Zayin. There is no Zayin in M, but, for the sake of completeness, we might perhaps compare G; S goes together with Si, as against G.

Heth. S resembles Si more than M.

Yodh. The angles in S and Si are on the whole more acute than in M.

Kaph. S and Si have the down-stroke bending to the left, in M it is straight.

Lamedh. The slant is more like that in Si than that in M.

Mem. The top parts of S and Si resemble each other with their parallel; M is different.

Nun. In S, the hook as a rule does not go to the top of the downstroke, in M it does.

Samekh. There is no Samekh in Si; S does not agree with M.

Ayin. S and Si have an oval in a slanting position, M has a circle.

Sadhe. S has the duplicated form of Si, not the archaic form of M.

Qoph. One of the forms of S agrees with the form of Si, as against M.

This comparison would seem to leave us no doubt that S is nearer to Si than to M and that the Ostraca belong to one of the later possible periods. The similarity is, in fact, so great that they can safely be ascribed to the latest period, that of Jeroboam II, i.e., to the years 774, 773 768 and 766. This dating would also prevent there being too wide a gap between their time and the time of the Lachish Ostraca. If the Samaria Ostraca were put at the early 9th century, the small degree of development from here to the Lachish Ostraca of the early 6th century, would be somewhat surprising.

ANCIENT HEBREW SEALS III (PLATE XIV)

BY A. REIFENBERG (JERUSALEM).

In continuation of two previous communications (*PEF Q.St.*, 1933 pp. 113 and seq. and 1939, pp. 195 and seq.) a few similar seals are described here.

No. 1. This seal is of limestone, 17 mm. long and 9 mm. thick. It was bought in Jerusalem and was probably found in its vicinity. The inscription reads :

לשלם For Shillem (or Shallum)

The name is found in the Bible in various forms (with and without *vav*) and on other seals, jar handles etc. (Diringer, *Le Iscrizisni Antico-Ebraiche Palestinesi*, pp. 213, 215, 236, 342 and 343 ; Torczyner, *The Lachish Letters* (III, 20). There is no need to deal here with the well known etymology of the name. The ornamentation and cutting of the seal is rather crude, the inserted dots being noteworthy.

No. 2. This seal is a rock-crystal and was found at Tell es-Safi. It is 13 mm. long, 5 mm. thick and somewhat weather-worn. The inscription reads :

ליהועז
=== = For Yehoaz (the son of) Ahab.
אהאב

The name Yehoaz is theophoric and means " God has strengthened "; it should be compared with such known names as Uzzi, Uzzia, Uzziah, Uzziel. The reading "Ahab", however, is not definitively established, the third letter being open to discussion. The second letter, *heh*, is certain.

No. 3. This seal was bought in Amman and is a transparent chalcedony of light blueish colour ; it is 18 mm. long, 7 mm. thick and not pierced. The inscription reads :

לעליה/א
===== = For Alyah the wife of Hananel
|שת/חננאל

The name עליה occurs in the Bible as the name of an

Edomitic tribe-leader (1 Chr. i, 51 and Gen. xxxvi, 40 where it is spelled עלוה and should be of course compared with the עלי name. It may further be mentioned that the female name יהועלי occurs in the Aramaic papyri (Cowley, *Aramaic papyri*, 22, 105).

תנגאל is frequently found in the Bible as the name of a tower in Jerusalem and corresponds to the Biblical name אלחנן "God is gracious"; moreover it is also found on seals (Diringer, *l. c.*, pp. 168 and 188). Besides such names as תנניהו or חנניה should be compared.

The *Heh* has only two strokes to the left, a peculiarity found also on a seal from Kerak(Diringer, *l. c.* Table, XXII, 15). The *het* shows the form characteristic for Aramean writing. There is a vertical stroke at the beginning of the lower line and two smaller strokes dividing the three words.

The seal originating from Amman, it is perhaps noteworthy, that the name Alyah occurs in the Bible as the name of an Edomite.

No. 4 This seal is in the form of a scarab. It was bought in Jerusalem, but is said to have been found in the Gaza District. It is made of rock-crystal and 20 mm. long and 8 mm. thick. The inscription, the second line of which is damaged, reads:

ליתם בן
===== = For Yotam the son of Yg . . .
יג. . .

The Biblical name י ותם is well known. Lately Glueck (*BASOR*, No. 79, pp. 13 and seq. 1940) has published a seal from Tell el-Kheileifeh, with the inscription יתם as in our case; Albright (*BASOR*, l. c.) at the same place deals with the etymological origin of the name.

The second line of the seal is unfortunately damaged. Since the first two letters are legible, a name like יגדליה or יגאל(יה) may be suggested.

The position of the *yod* both in the upper and lower line is unusual. There is a queer stroke at the bottom of the *lamed*, possibly due to a fault on the part of the engraver.

No. 5. This seal is of red and black stained hard limestone and was found in the vicinity of Hebron; it is 14 mm. long and 5 mm. thick. The inscription reads:

לבקש ב
==== = For Bakkesh the son of Nadabel.
ונדבאל

So far only the feminine form of the name Bakkesh was known from a non-Israelite seal found in Mesopotamia, read by Clermont-Ganneau (*Journal Asiatique*, 1883, I, p. 144, No. 22) " Bakkeshet ". This shows how the masculine name has to be vocalised. We have thus before us the unusual form of what Noth (*Die israelitischen Personennamen*, Stuttgart 1928, pp. 135 and seq.) calls a " confession " name, as in the case of names combined with " Obed ", as e.g. Obadyah (worshipper of God). We may assume that in our case it is an abbreviation of a name meaning " Seeking the face of God " (for help) as in Deut. iv, 29 ; 2 Sam, xii, 16 ; Ps. xl, 17 etc.

The name Nadabel already occurs on a seal (Diringer, *l. c.*, p. 189) and should be compared with names like Nadab, Nadabyah, Abinadab, Aminadab or Yonadab, etc.

No. 6. This seal is of red limestone and is said to have been found near Jerusalem. It is 14 mm. long and 5 mm. thick. The inscription reads :

לאבא
==== = For Abba (the son of) Bunni or Bunnah (?)
בוני (ה?)

The name Abba, so frequent in Talmudic literature, has hitherto not been found on documents of the Israelite period. It may be compared, of course, with the biblical name Abi (2 Reg. 18, 2). Unfortunately the last letter of the second line is so damaged that it is illegible. Both Bunni (Neh. xi, 15 ; ix, 4 ; x, 15) and Bunah (1 Chr. ii, 25) occur in the Bible. Moreover the name Buni-Ili is found in Babylonia (Ranke, *Early Bab. Personal names*, Philadelphia, 1905 ; quoted by Noth, *l. c.*, p. 84).

No. 7. The seal is a green nephrite (jade), 13 mm. long and 5 mm. thick ; it was found in the vicinity of Jerusalem. The inscription reads :

לרביהו For Rabbiyahu (or Ravyahu) (the son of)
הגלניה Higlaniyah.

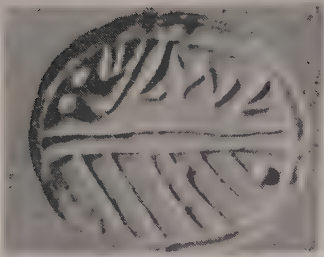
There is a dot after the first letter of the second line, which serves to fill the space. Both names are new.

The name רביהו is theophoric and can be explained in two ways. It can be read Rabbiyahu and translated " God is my Lord", in which case it should be compared with אדניהו (2 Sam. iii, 4; 1 Kings i, 5; 1 Chr. iii, 2 and often elsewhere). The similarly composed name Rab-bi-ili is found in the Murashu correspondence (Albert T. Clay, *Business Documents of Murashu Sons of Nippur*, Philadelphia, 1904, 70:15, Lo.E.). Furthermore, רבה is used as designation of the " Lady Goddess " in Phoenician (Harris, *A Grammar of the Phoenician Language*, p. 146). It can also be read Ravyahu, meaning " God is great ", and compared with the Biblical גדליהו (2 Kings xxv, 22; Jer. xli, 1 and often elsewhere). There is a great deal to be said in favour of either reading and a decision will be to a large extent arbitrary.

The name הגלניה, too, is theophoric and may be explained as " God exiled me ". This addition of the suffix 1st pers. sing. to a verbal form is remarkable and proves that there is no need to amend השבניה (Neh. iii, 10; ix, 5), as suggested by Noth (*l.c.*, p. 189), or other similarly constructed names. Possibly also such names as שבניה, etc., should be explained in the same way, as already proposed by Nöldeke (Diringer, *l.c.*, p. 180).

Moreover, the name הגלניה furnishes a clue with regard to the date of the seal. Presuming that the name refers to the Babylonian exile, we may take it that Higlaniyah was born there in the second quarter and his son, Rabbiyahu, in the third quarter of the sixth century. Probably, therefore, the seal was cut towards the end of the sixth century. Not only does the seal attribute the exile to an act of God (Higlaniyah), but it also expresses confidence in the Lord (Rabbiyahu), a typical token of Jewish piety for that period.

The author is again indebted to Prof. L. A. Mayer for valuable suggestions.



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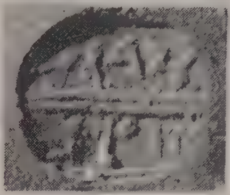

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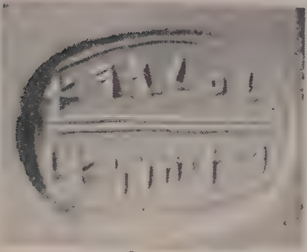

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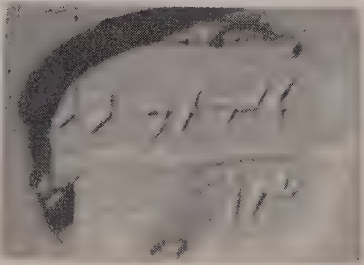

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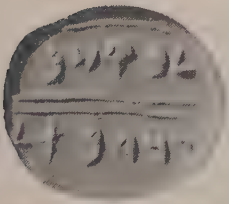

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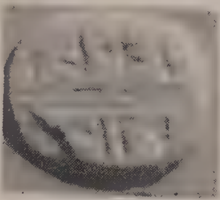

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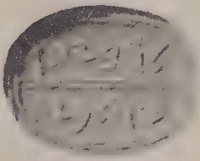

7

ANCIENT HEBREW SEALS

THE HEBREW UNIVERSITY OF JERUSALEM

By Norman Bentwich

The Hebrew University of Jerusalem has extended, as never before, during the years of war. Although some 200 students have enlisted in the British forces, the number enrolled has not been diminished. During the last academic year, the total registration was 1,156, 830 men and 326 women. The Government of Palestine granted the Hebrew University 330 immigration certificates, which were distributed between seventeen countries. In this academic year, which opened in November, unmarried male students between the ages of twenty and thirty are registered only if they hold a certificate from the Jewish recruiting authorities, indicating that they have been granted permanent or temporary exemption from service with the forces. It is notable that the number of students who graduated last year was very much larger than in previous years ; fifty-seven received the degree of M.A. or M.Sc., and twelve the degree of Ph.D.

The expansion of the University is due partly to the fact that Jerusalem has become the principal haven to which exiled Jewish professors and students from the whole continent of Europe can turn, and partly to the establishment of new departments and the opening of new buildings, which have been endowed by benefactors in America and South Africa. Last year the Pre-Faculty of Agriculture was inaugurated, and the University laboratories were opened at Rehovoth, the scientific agricultural centre of the country. They bear the name of Aaron Aronsohn who thirty years ago had established the first agricultural experimental station in the country. The students of agriculture spend two years in the study of the natural sciences at Jerusalem, and two at the college of agriculture at Rehovoth. Between these periods, they work for a year on a mixed farm.

The Medical Research Centre, which was opened in 1939 and is attached to the Rothschild-Hadassah-University Hospital on Mount Scopus, is engaged in various activities, some connected with the war effort, and some with the permanent study of diseases of the Middle East. Special courses in war surgery, camp sanitation and internal medicine have been given for civilian physicians ; and courses in the treatment of malaria, and dysentery have been given for the Medical officers of the British forces. Serums for typhoid and other diseases were supplied to the medical officers. The Cancer Research Laboratories have been extended during the year by the appointment of more research workers ; and it has recently been reported that the Department has made an important discovery for the treatment of wounds by an animal tissue.

Another aspect of the war effort is that the chemists, physiologists and biologists at the University are engaged in problems of war-time supplies and nutrition, and have found substitutes for raw materials which used to be imported into Palestine. A group of graduates of the University have formed a co-operative society for a pharmaceutical industry ; and the University's workshops have been turning out apparatus and instruments for factories and industrial purposes. And lastly, the Department of Geology is pursuing research on the chemical properties of Palestine minerals, which will prove of practical service to local industries.

The Museum of Jewish Antiquities was dedicated on Mount Scopus in April, on the sixteenth birthday of the University. It has been built with the endowment of a Jewish tailor, Mr. Morris Kootcher, of Windhoek, South Africa, who left his estate, about £50,000, for the Archeological Department of the University, in memory of Vladimir Tiomkin, a pioneer of the Poale Zion. In the facade of the building there is a stone from the Third Wall of Jerusalem, excavated by the archeologists of the University ; and in the Hall, a memorial plaque to Sir Robert Mond, a great benefactor of archaeology and our University. Dr. Magnes, at the dedication, pointed out that it was only after the World War that the Jewish Palestine Exploration Society and the Hebrew University were able to take the initiative in Biblical archaeology. But with the opening of the Museum of Jewish Antiquities, archaeology has at long last received the place it merits. The Museum will embrace the whole of Jewish history in all countries. Reconstructions have been made for it of ancient Jewish buildings ; and copies will be obtained of the Jewish antiquities preserved in museums all over the world. The finds from Ai—the Canaanite city captured by Joshua—which were made by a brilliant Palestinian woman archaeologist, Judith Krause-Marquet, have been presented to the Museum ; and are in a special room given by her parents. The Museum is to publish an archaeological journal in Hebrew. Part of the Kootcher Fund is being used to continue archaeological excavations. During the past year, work has been done on the Third Wall of Jerusalem, on an ancient Tel, Jerisha (near Tel-Aviv), and on Jewish catacombs in the villages near Jerusalem.

In the Faculty of the Humanities, which cannot be as directly concerned with the war effort, there has been steady development. By far the larger number of students are in this Faculty, which comprises the Institutes of Jewish Studies, Arabic and Oriental Studies, and the General Humanities, i.e. philosophy, history and the classical and Romance languages. Prof. Cassuto, formerly Chief Rabbi of Rome, who was appointed two years ago as Professor of Bible and is the head of the Department, has stated that the Hebrew University will, in the near future, become the chief centre of Jewish learning in the East. Conditions are exceptionally favourable for Biblical studies because of two factors which are found together nowhere else in the world—intimate touch with the language of the Bible, which need not be learnt as a foreign tongue, and direct contact with the memorials and records of the Orient and the scene of the books of the Bible. He foresees also that the University will become the heir of the European seats of Jewish learning which have been destroyed. The Jewish Department of the University Library is already one of the best in the world.

The Library as a whole is to-day the greatest collection of books anywhere in the Near and Middle East. The number of volumes is now approaching 400,000; and it was found necessary last year to build a new wing to stack the books. It is used by thousands of readers, including many Arabs.

The importance of the University not only for Palestine and the Middle East but for the world of science and scholarship has been stressed recently in a declaration by the leading scientists and men of learning in England, who have pointed out that at Jerusalem the scholars and men of science " help to keep the quickening flame of science and scholarship burning clear and free in the Orient, while the lamps are put out in the countries of Europe. During the years of war, the maintenance of the University must be borne by the English-speaking countries, and in largest measure by the great American community. We hope it will be realized, in spite of all other calls, how great is the significance, not only for Palestine, but for the world, of this centre of the mind and spirit in Jerusalem."

The Society of English Friends of the Hebrew University, which collects about £10,000 a year in England towards the University budget of £100,000, will be happy to receive contributions from any readers of the QUARTERLY who are interested, and to send a report about the University. The address of the Friends is: 199, Piccadilly, London, W.1.

AGRICULTURE IN PALESTINE

THE Report of the Department of Agriculture and Fisheries for the year ending March, 1941, centres round the continued depression in the citrus industry and the advance in the production of wheat and other grains. The citrus industry had been deteriorating, through over-production, for some years. The outbreak of war with Italy in the late spring of 1940 almost brought it to a standstill. This can be realized from the figures of exports. In 1938 Palestine exported 11,693,050 cases of citrus fruit : in 1940–1 the parallel figure was 109,803 cases. The Government, realizing the economic consequences of a collapse of the industry, came to its assistance, but only to the extent of keeping alive those groves that had reached fruit-bearing stage and were being properly cultivated. On the other hand, grain production, again with the assistance of the Government, made marked progress. It was both assisted and encouraged in this by the food position which was also unfavourably affected by the war. Imports were diminished and the home cultivators stepped in to fill the gap. Helped by excellent weather they were able to an appreciable extent to do this.

A. M. H.

CORRESPONDENCE

June, 1942.

SIR,

I am grateful to Col. Sir Charles Arden-Close for his interesting letter. I think we can now assume, by the help of the 1936 survey map, that the following facts are established.

In those historic hills stretching north from Beersheba right up to the Plain of Esdraelon, the two highest points appear to be about sixteen miles to the south and fourteen miles to the north of Jerusalem respectively. Tell Asur to the north is 1,016 metres (3,333 feet) and the point two miles *north* of Hebron 1,020 metres (3,347 feet).

I have tried to discover how it was that 3,747 feet was wrongly given as the height of the town of Yutta, a little *south* of Hebron in the *P.E.F.* 1 inch map issued in 1880. Small towns on this map are marked in red. The first figure of 3,747 is on the dark edge of this red, and might easily be taken as a 2, 3 or 8. Clearly it was meant to be a 2, but on the subsequent $\frac{3}{8}$ inch map of the P.E.F. it appears as 3, and this error is copied in Bartholomew's admirable $\frac{1}{4}$ inch wall map of Palestine and other maps.

It was with some reluctance many years ago that I accepted this figure, although I had no recollection of so commanding a height just there.

I am most grateful to Col. Sir Charles Arden-Close and the 1936 Survey for confirming my scepticism, and proving the figure which I had accepted and taught, is wrong.

Yours faithfully,

W. F. BUSHELL.

Birkenhead School.

REVIEWS AND NOTICES

Early Churches in Palestine. By J. W. Crowfoot. (The Schweich Lectures of the British Academy, 1937), London, Milford, 1941. 8*s.* 6*d.* net.

This volume is an appropriate sequel to Mr. Crowfoot's part in the excavations of Gerasa (Jerash) and his contribution of a section on the Christian Churches to the publication of that site. The name of Palestine in these circumstances must of course cover Trans-Jordan, but, even so, many readers will be pleasantly surprised at the wealth of material available for study, especially if they know how relatively few monuments are to-day visible above ground. Numerous discoveries have been made in the last twenty years, and the author's modest description of this work as " a sort of progress report " is true in a sense, though it hardly suggests this pleasantly written and informative, but not too technical, introduction to the subject.

After a somewhat disconcerting false start (taking a statement of Eusebius about the early Church in Jerusalem[1] to refer to a building constructed by Jewish Christians) the author glances first at the remains of the church at Dura-Europus on the Euphrates (of about A.D. 232, and older than any known church in Palestine)[2] and at other early churches of which records have been preserved. In the second chapter he gives a clear and adequate description of those Constantinian foundations that have left some traces to this day: the

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[1] *Demonstratio Evangelica, III*, 5 (Migne, P.G. XXII, col. 221, reads Ἐκκλησία . . . . ἀπὸ Ἰουδαίων σνγκροτουμένη). The same verb is applied by Eusebius to the Gentile composition of the Church after the foundation of Aelia (ἐξ ἐθνῶν συγκροτηθείσης *Hist. Eccl.* IV, 6; P.G. XX, col 316). Some confusion is involved in Mr. Crowfoot's reference to Vincent-Abel, *Jérusalem*, p. 898, where I do not find the word *conflé*, and where the rendering " *église . . . recrutée chez les juifs* " gives the correct meaning of the passage.

[2] The church at Amwas-Emmaus, which has been assigned to the third century, seems to Mr. Crowfoot to be much later.

Holy Sepulchre, the Church of the Nativity at Bethlehem, Eleona (Mount of Olives) and some remains at Mamre, near Hebron.

The present, mainly medieval, Church of the Holy Sepulchre, has little in common with the plan of Constantine's buildings, and few vestiges of these remain. Mr. Crowfoot writes: "At present the wonderful work of Pères Vincent and Abel embodies the sum of our knowledge: a restoration of the original building is still as impossible as it was when their work was published." Nevertheless, he is able to describe the main features of the original plan in sequence from east to west: first, the propylaea opening off a colonnaded street into the first court with its porticos and exedrae, then the church, called the Martyrium, which, we are told had double side-aisles and three doors (these were presumably in the east wall—no mention is made of the notion that the church was orientated with the doors at the west end). Beyond the Martyrium lay a second open court, or atrium, with porticos on three sides, within which was the rock of Calvary, and farthest to the west the Anastasis, a circular building surrounding the Tomb, on the site of the present Rotunda. The plan of the Martyrium has not been recovered; our knowledge is derived mainly from Eusebius, whose description includes a puzzling feature: "the head of the whole, the hemisphere, at the end of the church"—opposite the doors. Vincent and Abel are content to see a reference to the semicircle of the apse; other authorities think "hemisphere" can mean only a dome and must have some connection with the description of the Anastasis. To Mr. Crowfoot it seems "probable that the Hemisphere was a circular building abutting on the end of the basilica like the octagon at Bethlehem." To this one may object that there is no obvious reason for the existence of a second circular building; moreover, he himself points out the relationship between the Anastasis and the Constantinian octagon at Bethlehem, namely that in both cases the building was designed to enable pilgrims to have a view of a shrine.

The site of the Church of the Nativity erected in the reign of Constantine is now occupied by Justinian's building. In

1934, however, Mr. William Harvey, working for the Government of Palestine, uncovered enough of the original church to enable the main features of its ground-plan to be ascertained. The body of the church, consisting of the nave and double side-aisles, was approximately square; at the east end of the nave a flight of three steps led up to an octagonal chapel, which stood above the cave, or grotto, of the Nativity and in the middle of which was the railed-in mouth of a circular shaft cut through the roof of the cave. These discoveries have raised a number of still unsolved questions—the position of the altar in the Constantinian building, the steps or other means of access into the grotto, and the date of the mosaics of the floors. Mr. Crowfoot suggests that the church at Bethlehem, like the Anastasis as originally planned, had no altar, further, that there was no descending stairway from the octagon to the grotto (the entrance may have been through a passage opening outside the church). In his view "the shrines were not built for liturgical worship, but that all might see the places where Christ was born and buried and rose from the dead." This consideration no doubt applies with much force to the grotto, moreover there are objections to all the suggested situations for the altar and chancel; yet it seems almost impossible to believe that the Liturgy was not celebrated within the building, seeing that there was no separate church to correspond to the Martyrium in Jerusalem. A temporary altar, set up at the east end of the nave or at the top of the steps into the octagon, may be deemed a possible expedient, though scarcely consistent with the veneration for the altar expressed, for example, by Eusebius in his description of the cathedral at Tyre.

The mosaic floors, found in both nave and octagon, are apparently accepted as belonging to the period of Constantine, despite the opinion of Père Vincent, who assigned them to the fifth century. On the other hand, the capitals in the present church are now (in deference to the weighty arguments advanced by Mr. Harvey) believed to be of Justinian's time, notwithstanding that a Constantinian origin has till recently been attributed to them by universal consent.

In general, the later buildings at Bethlehem (including the roofing over of the grotto) come within the scope of an important chapter (pp. 37-101) in which the author describes and discusses the setting, or precincts, and the several parts of a church (chancel and pulpit, narthex, chapels and baptistery) and various types of plan—the numerous basilicas and the less common cruciform, octagonal and circular churches—as they developed from the fourth to the seventh century. A few pages devoted to materials and construction are followed by an interesting chapter on the subject of decoration, with particular reference to records of mosaics and paintings on walls, to marble and mosaic floors and to capitals and other specimens of carving in stone. A brief historical retrospect, in conclusion, draws attention to the fact that the building and adornment of churches did not entirely cease until a considerable time had elapsed after the Arab conquest.

Many of the best examples in the above-mentioned categories have been discovered at Gerasa, where the churches, though most of them are of the sixth century, include work of the fourth, fifth, and early seventh century, thus providing a valuable standard of comparison for the historical treatment of the subject. Mr. Crowfoot makes good use of his intimate acquaintance with that site—as, for example in his treatment of the various forms of apse found in Palestinian basilicas. Among the observations scattered through the book, we may note the remarks (at p. 45) on the domination of symmetry to which architects were subject in the fourth century, but from which their sixth-century successors had become free—on the gradual widening in the plan of the chancel to conform to the development of the Liturgy (p. 51)—on the advantages of timber as a material for roofing, instancing the Dome of the Rock, "how much it has gained in grace and lightness by virtue of its timber dome!" (p. 105). A point which is emphasized is that the practice of using old material (especially capitals and other carved fragments) was not confined, as has been supposed, to the Islamic period, but was rife during the centuries of active church-building.

In the chapter on decoration we notice that evidence is accumulating for the use of glass mosaic to adorn interior walls, though we are still dependent on literary sources for our knowledge of the subjects depicted. Very few of the marble slabs used for revetment or paving have escaped destruction, but, as is well known, mosaic floors have been found in a great number of ecclesiastical buildings. The most important of them are illustrated in Pls. XI-XXVI, including those at Tabgha (from a church of uncertain date, built to commemorate the miracle of the loaves and fishes), which Mr. Crowfoot considers by far the most beautiful mosaics in Palestine, unique in composition and in quality, the work of an original genius.

It only remains to be said that the illustrations have evidently been selected with care and are extremely well reproduced ; the numerous plans and diagrams in the text, and a map showing the principal sites, add notably to the usefulness of this attractive monograph.

G. M. FitzGerald.

Report on the Water Resources of Transjordan and their Development. By M. G. Ionides, Director of Development, Transjordan ; Incorporating a Report on Geology, Soils and Minerals, by G. S. Blake, Geological Adviser to the Government of Palestine. Published on behalf of the Government of Transjordan by the Crown Agents for the Colonies. London, 1939. Price 30*s*.

The Librarian of the Colonial Office has generously presented to the Fund a copy of this valuable Report, which must be consulted by all who are interested in the future of Transjordan. It is a very complete and elaborate Report of some 400 pages, supplied with an abundance of maps, diagrams and illustrations. It owes its origin to the recommendation of the Palestine Royal Commission which stated that opinions with regard to the amount of cultivable land in Transjordan were apt "to vary with political prepossesions" and advised that the uncertainty should be removed and a survey of Transjordan should be made and a scheme prepared for irrigation and development.

Funds for the Hydrographic Survey were made available in October, 1937, and the Survey was largely finished in the field by the winter of 1938. Mr. Ionides remarks in the Preface that "the difficulty of short records pervades the whole investigation," the main question being the amount of water available over the areas in question.

The hydrological and geological parts of the Report are mainly due to the researches of the late Mr. G. S. Blake. It is stated in *The Geographical Journal*, for May, 1941, that "his geological studies in Palestine and Transjordan had received widespread recognition. He was killed whilst engaged in prospecting for minerals in the Dead Sea area, when his party was attacked by armed bandits." A sad loss, for the geological groundwork is of the greatest importance. It is a melancholy duty to record other murders in connection with such investigations, for although the Report is chiefly concerned with water supplies, there is also to be considered the application to irrigation and, for this purpose, a contoured survey was required. Mr. V. Serbinovitch was in charge of this survey in the field, and he and his camp were attacked by bandits and he and two assistants were killed in August 1938. This field party was then withdrawn and the contouring came to an end.

The total area of Transjordan is given as about 90,000 square kilometres or about 35,000 square miles, somewhat larger than Scotland; and the population is stated to be 325,000, or a little more than 9 to the square mile. "Of the whole area of Transjordan only about one-tenth has as much as, or more than, 200 millimetres (8 inches) of rainfall, a thin strip in the north-east ... In the rest of the country only nomads can subsist." The area over which the rainfall exceeds 200 millimetres is given as somewhat more than 9000 square kilometres, or some 3500 square miles. Of this area only half is cultivable, "the rest being denuded hill-side, rocky outcrop, forest or scrub." The cultivable area is 4,490,000 dunams, i.e 1,122,000 acres, of which 260,000 dunams are irrigated and the rest dry-farmed. This area is chiefly in the north-west.

So much for the statistics. As regards the use made of the available water, it is remarked that practically all is used for irrigation, so far as concerns the water in springs and streams, but it is used wastefully. Proper control will depend upon land settlement, now far advanced. " There is only one sphere of development which can surely, quickly, and profitably contribute to increased production of which Transjordan stands in need, namely irrigation." Mr. Ionides sums up against any present attempt to undertake irrigation development *in the hills*, except by taking existing irrigation systems under control. In the hills the effort of the Government should be limited to providing stimulus to individual effort, as is being done through land settlement and education.

But in the Jordan Valley the case is different. Here, if it is desired to limit Government development to profitable undertakings, there are two possible projects; first, the control of existing irrigation systems in the Ghor, i.e the bed of the valley; and, secondly, a scheme for a new Yarmuk Diversion Canal. It is calculated that these schemes would cost £P.120,000, and would occupy several years. The Yarmuk Canal would take off from the River Yarmuk just within the gorge, and would divert " a discharge of 1.76 cubic metres per second from the river." The total cost of the Yarmuk scheme is estimated at £P.70,000, and this would be a paying proposition.

The above review is a mere sketch of a very complete and elaborate report of which, no doubt, more will be heard in the years following the conclusion of the world war.

C. F. ARDEN-CLOSE.

A. Reifenberg, *Ancient Jewish Coins*. RUBIN MASS, Jerusalem, 1940. (Reprinted from the *JPOS*, XIX, 1939–40), 51 pp. XIV pls.

Dr. Reifenberg, an experienced collector and scholar of Palestinian antiquities, deals in this monograph with 217 coins (nearly all of them are reproduced on the fourteen plates), which are mainly in his own possession: only thirty-three of them belong to other collections (thirteen to the British Museum, three to the Palestine Archaeological Museum, etc.). The name of the author is familiar to the readers of this QUARTERLY, to which he has contributed two articles on the same subject (1927 and 1935).

In the first part (pp. 1–26) Dr. Reifenberg traces the historical and artistic background of Jewish numismatics, while in the second part (pp. 27–51) he gives a detailed description of the coins. The coins are divided in the following classes: the Persian Period (Nos. 1–3), the Maccabean Dynasty (Nos. 4–25), the Herodian Dynasty (Nos. 26–117), the Procurators (Nos. 118–136), the First Revolt (Nos. 137–151), Judaea Capta (Nos. 152–162), the Second Revolt (Nos. 163–207).

It is the first time that the new class of "the Jewish coins of the Persian Period" has been introduced into a numismatic monograph. According to Reifenberg, the coins of this class "bear the inscription Jehud, the official Aramaic name of the province Judaea in Persian times. . . ." Thus, Reifenberg agrees with Sukenik that "these coins prove that Judaea enjoyed the privileges of an autonomous province. . . ." Dr. Sukenik's suggestion (*JPOS*, XIV, 1934, pp. 178 ff., and XV, 1935, pp. 341 ff.) to read the inscription on these coins *Y-h-d* instead of *Y-h-w* as it was read before, is certainly plausible and has been accepted by several scholars (Albright, Dussaud, G. R. Driver, Alt, Sellin, etc.), but it is not yet a fact. Besides, Professor Cook pointed out rightly (*PEF QS*, 1936, p. 79, n.1) that "that a coin should bear the name of a province—and spelt in such a way!—needs more justification than it has as yet received. . . . On the other hand, can one say that the script on the coin must be *either* Phoenician *or* Aramaic? . . ." This concerns particularly the famous Yahu coin of the British Museum (G. F. Hill, *Catalogue of the Greek Coins of Palestine*, 1914, lxxxvi ff., Pl. XIX, 29; Reifenberg No. 3). As to Reifenberg No. 1 (Salzberger Collection), the reading *Y-h-d* is problematic (although the coin of Clark Collection, Sukenik, *JPOS*, 1935, pp. 341 f., would be rather in favour of the reading *Y-h-d*); in No. 2 (found at Beith-Zur) it is improbable; in No. 3, possible, but not probable. All the three coins belong to different classes. All in all, I agree with Prof. S. A. Cook (v. *The Yahu Coin*, *ZATW*, 1938, pp. 268 ff.), "that more evidence must be produced before the new reading can be safely accepted."

But in other Jewish numismatic problems, and particularly in those still open to question, Reifenberg's judgment is generally sound. So it is concerning the representation on the obverse of the tetradrachms of the Second Revolt of the Jews, so also regarding the different ways of spelling the name Jonathan—Jehonathan, etc. In this short review it has been impossible to mention all the points of interest in Reifenberg's monograph. One may disagree with some of Reifenberg's views: I, for example, maintain my view that the Early Hebrew alphabet had not been replaced suddenly and completely by the square script: both of them were, according to my opinion, used for some centuries contemporaneously, although in different quarters of the population: the square script was the official and international one, while the Early Hebrew writing has remained the "religious," national, patriotic script (exactly the same conditions existed in reference to the Aramaic and Hebrew languages): one can hardly believe that an obsolete script (not in use for centuries) has been drawn out of a chest, and put on such common objects as coins are! Thus, the epigraphic development should be taken in some consideration.

At any rate it must be stated that Dr. Reifenberg's monograph is a notable contribution to Jewish numismatics, and it will be welcome not only to numismatics, but also to historians of antiquity, to archaeologists working in the ancient Near East and to historians of ancient art.

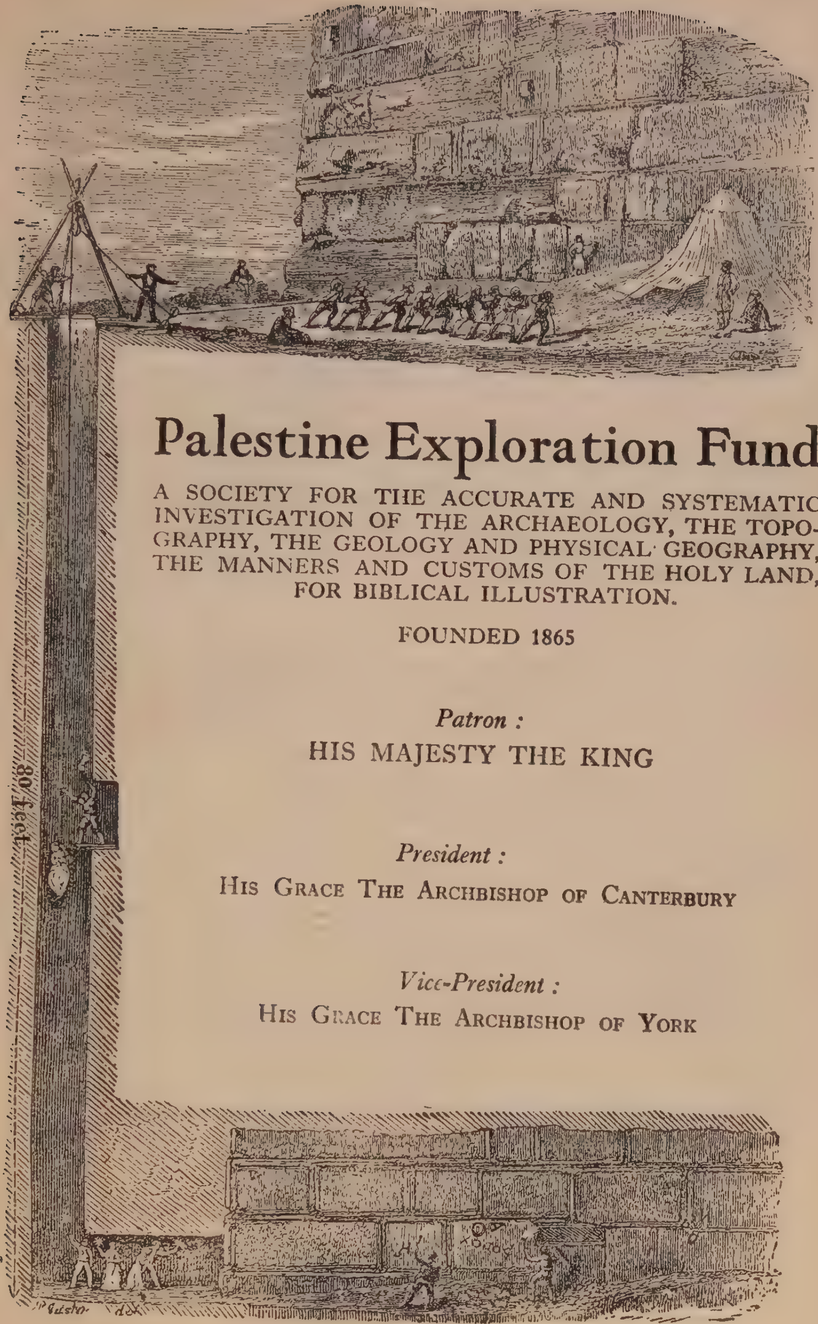
There are a few slips in this book: especially in the quotations (*e.g.* M. A. Levy, *Geschichte der jüdischen Münzen*, 1826—p. 19, n.10, and A. Levy, *Jüdische Münzen*, Leipzig, 1862—p. 25, n.3, are evidently M. A. Levy, *Geschichte der jüdischen Münzen*, Breslau, 1862), which, however, do not diminish the importance of the monograph.

D. DIRINGER.

The Committee have to acknowledge with thanks the following:

American Journal of Archaeology, January-March, 1942.
American Journal of Philology, January, 1942.
Annual Report of the Smithsonian Institute, 1940.
Bible Lands, April, 1942.
Biblical Archaeologist, February, 1942.

Bulletin of the American Schools of Oriental Research, April, 1942.
Expository Times, 1942.
Harvard Theological Review, January, 1942.
Journal of Near Eastern Studies, Vol. I, No. 1, January, 1942.
Journal of Roman Studies, Vol. XXXI, 1–2.
Journal of the Royal Anthropological Institute, Vol. LXX, pt. 1.
Journal of the Royal Society of Antiquaries of Ireland, March, 1942.
Journal of the Transactions of the Victoria Institute, Vol. LXXIII.
Religions, April, 1942.
Report of the United States National Museum, 1941.



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THE
PALESTINE EXPLORATION FUND

NOTES AND NEWS

By the time this issue of the QUARTERLY appears we shall be more than halfway through the fourth year of total war; total in more senses than one. Not only is every country of the world, with very few exceptions, lined up on one side or other of the vast struggle of light against darkness, good against evil, the freedom of man's spirit against the bondage of all his powers, but for the first time in history there are no non-combatants. It is not to be wondered at if, as the conflict wavers to and fro, some should feel that the cloudy outlines of apocalyptic imagery are taking visible shape, that there is war in heaven, that the man of sin is revealed, that Satan is come down from heaven in great wrath, knowing that his time is short. Nor is it to be wondered at if the ancient words repeat themselves like a refrain, " So when all these things are come to pass, then lift up your heads for your redemption draweth nigh." It is surely not irrational to believe that night cannot last for ever, and that the ultimate victory of light over darkness is certain. In the meantime even so small a thing as the carrying on of the greatly reduced activities of the Palestine Exploration Fund and other similar enterprises is a torch of the spirit, a minute star in the night, which must not be suffered to be put out.

Hence it is with a sense of cheer that one welcomes the appearance of two more numbers of the new *Journal of Near Eastern Studies*, with its large margins, excellent paper, clear type, fine illustrations, and valuable material, as a sign of the resolve that the lamp of learning shall be kept alight. These two numbers contain many interesting articles, among which may be mentioned articles by J. P. Hyatt on *Jeremiah and Deuteronomy*, by Helene J. Kantor on *The Early Relations of Egypt with Asia*, by A. Poebel on *The Assyrian King List from Khorsabad*, and by the veteran New Testament scholar Professor E. J. Goodspeed on *The Possible Aramaic Gospel*. Professor Poebel's article is to be concluded in a later issue, and promises to afford important new material for the history and chronology of Assyria. Professor Goodspeed's article is particularly welcome, since the illusory phantom of Aramaic originals for our present four Greek Gospels has been pursued of late with much energy. The late Professor Burney's book *The Aramaic Origin of the Fourth Gospel* did not succeed in bringing many English New Testament scholars to accept his views on this point. Professor Torrey's book *Our Translated Gospels*, and Professor Olmstead's recently published *Jesus in The Light of History*, have restated the case for Aramaic originals with much learning, and have used, not altogether wisely, the *argumentum ad hominem* of a general lack of knowledge of Semitic languages among New Testament scholars. It is quite certain that no one who has made a minute and careful study of what is generally called the Synoptic problem can ever be induced to believe that the Gospels as we have them were written in any language but Greek.

Professor Goodspeed's article has dispelled a number of prevalent misconceptions concerning the Greek of the New Testament and the problem of Greek literature in the first century A.D., and should clear the minds of many who have been half convinced by the arguments of the supporters of the theory of Aramaic originals for our Gospels.

Nevertheless it remains indisputable that the mother-tongue of Jesus was Aramaic, and that his teaching was given in that language ; hence a strong Semitic colouring is bound to be apparent even in the Greek language in which the record of His life and teaching has been transmitted to succeeding generations. A book like Dalman's *Words of Jesus* is the best example of a really profitable and illuminating application of Aramaic to the elucidation of the Gospel records.

In *The Jewish Quarterly Review* for April, 1942, appears a review by Professor G. E. Wright of the long-delayed publication of Mr. Alan Rowe's *The Four Canaanite Temples of Beth-shan I.* As Professor Wright reminds us, the Beth-shan temples, together with the Lachish and Shechem temples are our chief archaeological source for the knowledge of the material features of Canaanite religion in Palestine.

Professor Wright suggests that the raised bench in the cubicle, which Mr. Rowe calls an altar, was intended to hold the statues of the gods worshipped there, and that the bench was topped with limestone blocks with dowel holes in them to hold the statues. Professor S. A. Cook pointed out in his Schweich Lectures on The Early Religion of Palestine that the Beth-shan temples show no break between Canaanite and Israelite occupation, and that the Israelites must have taken over and adapted the Canaanite temples for their own rites. Professor Wright promises a fuller review in the *American Journal of Archaeology*.

Dr. Solomon Zeitlin, in the same issue of *The Jewish Quarterly Review*, also deals with the question already mentioned of Aramaic Gospels. He favours the theory of Aramaic originals for the Synoptic Gospels, but rejects the possibility of an Aramaic original for the Fourth Gospel. He rejects Dr. Torrey's translation of the word *gilionim* as *euangelion*, gospel, and would render it as meaning *margin*. This is the correct Talmudic rendering, although in the Hebrew of the eighth century the word has the meaning *tablet*. In the passage of the Tosefta which Dr. Torrey quotes to support his view the *gilionim* are distinguished from the *books of the Minim*, whereas one would have expected that the books of the Minim, that is, Christian writings, would have included the Gospels, a point which somewhat weakens the argument basedon it.

In No. 86 of the *BASOR*, Professor Wright deals with two points relating to the Exodus and the Conquest of Canaan. He reviews recent discussions by Professor Rowley and Professor Garstang respectively, and remarks that " Since the publication of the pottery of the Lachish temple, however, the final blow to Vincent's date in the second half of the thirteenth century has been given." With regard to this point he concludes his remarks with the words, " Thus the problem of Jericho is more of a problem than ever. *Absolutely all that we can now say about it with certainty is that the city fell to the Hebrews sometime between cir.* 1475 *and* 1300 B.C." (The italics are Professor Wright's.) The second point concerns the tradition that the Israelites in Egypt were forced to work on the " store-city " of Raamses. With regard to this point Professor Wright remarks that the archaeological evidence indicates that the Pharaohs of the XVIIIth dynasty, with their capital at Thebes, did little building in the Delta, and that Israelite forced labour on royal projects in the Delta, therefore, could only have been in the XIXth dynasty. Professor Wright concludes that it is impossible to harmonize the archaeological data completely with the biblical accounts of the Exodus and the Conquest. He utters a warning against yielding to the temptation to translate the possibility of any hypothesis into a certainty.

The third issue of *The Biblical Archaeologist*, September, 1942, continues a very interesting article on the archaeology of Corinth in relation to Paul's journeys. This valuable little paper is highly to be recommended to the Bible student.

Volume X of *The Quarterly of the Department of Antiquities in Palestine* contains a valuable article by Dr. Avi-Yonah on a group of Greek inscriptions from Ascalon, Jerusalem, Beisan, and Hebron. The inscription from Jerusalem offers the earliest epigraphical evidence for the use of the title *Patriarch*. The reference is to the Patriarch Peter of Jerusalem, and the date is circ. 531 A.D.

Samaria-Sebaste I. The Buildings. Attention is drawn to the announcement inside the front cover of this number. Published at £2 2*s*., the price to annual subscribers of one guinea to either the P.E.F. or the B.S.A.J. is £1 1*s*. It has been issued free to annual subscribers of two guineas to either, or one guinea to each society. Address orders to the Assistant Secretary, P.E.F., " Branksome," Keswick Road, Fetcham, Leatherhead, Surrey.

FLINDERS PETRIE

By Olga Tufnell

Professor Sir Flinders Petrie died in Jerusalem on July 28th, 1942 at the age of eighty-nine. He quoted the words of his favourite author Epictetus at the beginning of his Autobiography, and as an epitaph they are singularly appropriate:

" The means which thou gavest me for the perceiving of thy government, and for the following of the same, have I not neglected. . . . I am content that I have used thy gifts so long."

William Matthew Flinders Petrie was born at Charlton in 1853, the only child of parents who had a tradition of culture and science behind them. A passion for discovery had already found expression in his grandfather, Captain Matthew Flinders, whose explorations in Australia were terminated by his early death.

His mother's gift for languages led to a premature attempt to teach him the rudiments of four different grammars at once, with the perhaps fortunate result that a formal education was forbidden him on grounds of health. He was then free to develop along his own lines of enquiry, stimulated by the varied activities of family friends. Coins and weights were his first objects of study, and in his early 'teens he started collecting them for the British Museum. With his father's help, he had evolved his own methods of survey, and his mathematical education was reinforced by a University Extension course, which was his only contact with an orthodox system of instruction. A series of field surveys of earthworks in southern England led to the publication of his first book, *Inductive Metrology*, in 1875. Soon afterwards a casual interest in Piazzi-Smyth's theory of the Pyramids grew, with parental encouragement, into a resolve to investigate its truth. In 1880 he began his survey of the Great Pyramid and published his conclusions in the following year, exploding the very theory which he had hoped to prove. His journey had far-reaching consequences ; he felt that " Egypt . . . was like a house on fire, so rapid was the destruction going on. My duty was that of a salvage man ; to get all I could quickly gathered in."

The next fifty years were spent with this purpose in mind—years which varied little in hard working routine. The winters were spent in Egypt, living under Spartan conditions which were those he preferred. He eliminated the need for many things which other people consider essential : boxes, for instance, fulfilled a multitude of uses, " I sit upon boxes," he once wrote, " I stand upon boxes, I slept upon boxes until I took to the sand floor, I eat out of boxes, my very plate is a biscuit-tin lid, and all the little antikas are stowed away in boxes." In later years, his camera, made from a biscuit-box, was one of his most precious possessions.

The summers were spent in England, writing up his results and exhibiting those antiquities left him by a government administration in Cairo, with which he could not always agree. Throughout his life, he observed the duty of publishing his finds before starting another season in the field, a system which provided a limited picture of each phase in every volume, rather than a final report. His financial collaboration with the Egypt Exploration Fund (1892) was followed by eight years under the joint auspices of Jesse Haworth and Martyn Kennard. Throughout this period he had the support of Miss E. B. Edwards, and when she died in 1891, she bequeathed a foundation for a chair of Egyptology which he held for many years at University College, University of London. A small but regular financial income was assured through the formation of the British School of Archaeology in Egypt in 1905 and the effort involved in collecting single guineas from the general public was amply repaid by the number of people who gained a personal interest in the work. From the time of her marriage in 1897, Lady Petrie's devotion was mainly responsible for this successful organization.

Sir Flinders' connection with Palestine dates back to 1890, when he travelled through southern Judea to survey sites for the Palestine Exploration Fund. He chose the eroded scarp of a small mound, Tell el Hesy, to provide a section to show the stratification of pottery, which formed a basis for work in future seasons. Next year, he was back in Egypt, while Dr F. J. Bliss continued at Tell el Hesy. Flinders Petrie did not return to Palestine for over thirty years, but he contributed much to Biblical archaeology in the interval. The geography of the Egyptian campaigns of conquest in Palestine, described in the Tell el Amarna Letters, attracted him as well as others, and his observations on the historical accuracy of the Books of Genesis and Exodus are recorded in the *International Biblical Encyclopedia*. The great stela of Meremptah found at Thebes, on which the word " Israel " occurs has proved to be one of his best known discoveries. Another link with Palestine was a season's work at Tell el Yehudiyeh, on the road to Egypt, where a camp enclosure was found similar in construction to the series of fortresses in Syria and Palestine. Defences of the same type were found by Professor Petrie at Tell el Fara and Tell el Ajjul during his last years of activity on southern Palestinian sites.

Those years were characterized by the usual energy and concentration. Before daybreak, he was to be seen striding up the stony path towards the work ; as the sun rose he stood for a moment on the summit of the mound, his cape streaming behind him, the wind ruffling his hair and beard, his precious measuring rod in his hand. Workmen hurried to their places, a whistle blew, and the day's work began. Surveying in wind or rain, planning, drawing, writing, his day was all too short. In the cool hour between dusk and dark, he would sometimes walk over the hills and through the valleys talking of history, philosophy or music. His humour was entirely Celtic and he was aware of his idiosyncracies. He believed in personal contact with his men, yet the intensity of his work did not give him the leisure in which close personal friendships are made. His choice of students was unorthodox, but the number of these who subsequently became distinguished Egyptologists has amply proved the sureness of his intuition.

The catalogue volumes which record his finds throughout the years do not sum up his real achievements. He was not concerned with the details of research ; he merely used them to fill in the picture of history as a whole ; his consistent aim was to follow the migration and relation of ethnic groups, the development of art and writing, and the causes of racial decline. His view of man's rise and fall through different cycles, was set out in the smallest and yet most famous of his books, *Revolutions of Civilization* in which he foresaw present conditions at a time when man felt secure in his achievements and certain of unchecked progress. His clear vision of historical continuity and his own contribution to knowledge can be partially described in words which he himself applied to historians in general :

" The man who knows and dwells in history adds a new dimension to his existence ; he no longer lives in the one plane of present ways and thoughts, he lives in the whole space of life, past, present, and dimly future."

AN OUTLINE OF THE CULTURAL HISTORY OF PALESTINE DOWN TO ROMAN TIMES

By M. E. Kirk

" In the accepted sense history only commences with the written word in the form of inscriptions and documents ; but the history of civilization and culture is read rather by their tangible results. Hence it is that while ordinary history is dependent on the written statements, nearly always biased for or against the subject, the history of art and culture generally is read in the light of the incontrovertible and concrete facts in which it is written."

Until the last twenty years very little was known of the ancient culture of Palestine. The Old Testament stories are so marvellously condensed that they contain hardly any local colour. Written as they were for readers who could fill in the details of background for themselves they help us very little in the reconstruction of contemporary life. But with the systematic and scientific excavation of such important city sites as Gezer, Beth-Shan, Lachish, Samaria, Megiddo, Gaza, Beth-Pelet, Ophel, Jericho, Ta'anach, Beit Jibrin, and others, such a flood of light has been thrown upon the darkness, that, in its major outlines at least, the shape of the past is now distinctly discernable. This paper is based upon the writings of the chief excavators concerned.

Like most other countries Palestine was found to have passed through the usual three stages when first stone, then bronze, and finally iron were the materials from which the chief weapons were made. The earliest date for the first two stages is uncertain, and the assignment of the earliest use of bronze in Palestine to about 3000 B.C. is purely tentative. In all cases the various stages overlap and there is no hard and fast line of demarcation, nor do all areas develop at the same rate.

Perhaps the most interesting fact that has emerged from all these excavations is that there has never been anything approaching a characteristic Palestinian art or architecture. The inhabitants of Palestine do not appear to have made a single contribution of any kind towards material civilization ; and in the Hebrew period we are confronted with the amazing spectacle of a community which not only produced religious writings of such outstanding beauty that they rank among the world's masterpieces, but gave to humanity the most lofty conception of Deity yet achieved, and yet in its general culture was stimulated no further than to make clumsy imitations of foreign importations and docilely adapt the habits and manners of its neighbours. Was it that, at such an early stage in human development, the unconscious spiritual impetus necessary to produce so advanced an aspect of Deity sapped the people of all further creative energy ? Or was it that the geographical position of Palestine, as the natural corridor across which great nations exchanged their wares and marched their armies to battle, so exposed it to continual interference, aggression and annexation that it was never able to enjoy the amenities of peaceful existence long enough to develop any individual culture ? Whatever the reason, it must give Palestine an almost unique place in history.

What primitive semi-human creatures inhabited Palestine during the earliest part of the Paleolithic Age is unknown. Eoliths, or " dawn-stones," have been picked up in Moab and Ammon, but since it is extremely difficult to distinguish such stones from naturally fractured ones, the question of their authenticity as man-made must remain doubtful. But we do know that Neanderthal man with his " Mousterian " culture appeared in Palestine at a very remote date. It is suggested he was there some time before his advent in Europe. Entering by way of Syria and North Palestine he gradually worked his way down from the high plateaus to the plains, the valleys and the sea coast. To-day his flint hand-axes, scrapers and borders are found lying in the caves of Phoenicia and Mt. Carmel, on the maritime plain, on the summit of the Judaean Mountains, in the valleys of Samaria and on the uplands of Moab. In 1925 the exciting discovery by Mr. Turville Petrie of a Neanderthal female skull—now known as the Galilean skull—in the Cave of El Zuttiyeh, gave science the first opportunity of comparing the Neanderthals of Palestine with their European relations. Since then other caves and regions have been carefully excavated and numbers of skeletal remains recovered, together with quantities of flint implements which show distinct affinities with the Mousterian culture of East Europe and Africa. Still more than half ape, and not considered to be a progenitor of Man, the appearance of Neanderthal man is too well known to need description. In Palestine, however, it seems that he was further developed physically than his European counterpart. His skull capacity was larger, the cranial vault higher, and he had distinct traces of a chin, though he was incapable of anything approaching coherent speech, and his mental development was extremely low.

His lack of hunting weapons and his shambling gait indicate that he was no hunter, but he must have contested with wild beasts for the possession of the limestone caves in which he has left us his stone tools and the bones from his meals. He ate whatever he could catch with his own hands or by means of a simple trap. Fire he seems to have known, and in Europe at least it is clear that a vague appreciation of natural forces outside himself had dimly begun to penetrate his consciousness ; the presence of flint implements with his dead indicate that he had also begun to visualize some sort of existence beyond the grave. Otherwise he lived as do the animals in self-sufficient family groups of male, female and offspring, owing no allegiance to any clan.

After him in every part of the world appears Homo Sapiens —true man. In Europe his remains were first discovered in the Aurignacian caves of France from which his culture takes its name. In Palestine he seems to have inhabited the same regions as Neanderthal man, and there is growing evidence in most places that for a considerable time the Aurignacians and the Neanderthals remained side by side, borrowing ideas from each other and possibly interbreeding, though this latter is not certain.

It is with the Aurignacians that we first meet an entire change in the technique of flint working. Instead of the Mousterian method of chipping a lump of stone into the required shape, they struck flakes from a flint core trimming the edges by a method of pressure flaking. This greatly increased the variety of implements that could be made, and it became possible to fit knives, arrow-heads, saws, lance-heads and harpoons into bone and wooden handles. Palestinian examples found in caves at Wady el Mughara, Schubka, El Wad and elsewhere, show strong affinities with West Europe and Egypt; though as regards artistic efforts in the carving of bone, and in cave sculpture, nothing approaching the high standards of the European group was ever reached. Nor in the succeeding Magdalenian phase—poorly represented in Palestine—has any example of the magnificent polychrome paintings so well known in the caves of the Pyrenees yet come to light. Of the third, Solutrean, phase with its exquisitely worked laurel leaf flints there is so far no indication in Palestine whatever.

These early ancestors lived mainly a cave life, though in summer they probably sheltered behind wind-breaks made of plaited branches, or under over-hanging ledges. Being entirely a hunting people, the necessity of following the herds they fed upon precluded any possibility of a settled life. The remains of hearths in the caves show that the roasting of meat was known, and bones were expertly cracked to extract the marrow; cracked human bones betray that the eating of captured enemies, or inconvenient relatives, was a not uncommon custom.

Of agriculture, the domestication of animals, pottery or weaving they knew nothing whatever. If food was stored, or had to be carried, it was placed in gourds, or in animal skins. The coldness of the climate taught the advantages of skin clothing, which was sewn together with bone needles, and fastened with slivers of bone or wood. Vanity was satisfied by painting or tattooing the body, set off by the necklaces of shells and animal teeth, which are found in the graves. Amulets of bone and stone appear for the first time in human history. Man by now had become well aware of the incalculable and seemingly malignant forces about him, and of the terrors of pain and death. Conscious of his own helplessness he evolved a system of magic whereby he was protected from the things he feared. Magic could also confer other advantages, and by elaborate ritual dances and other special observances the fertility of herds could be increased, and the arrows of the hunter find their mark, enemies could be overcome and tribal power increase. It is possible that by Magdalenian times loosely united tribal units had acquired totem animals, in whose shape the tribal deity was represented. The bull, the cow and the serpent seem to be among the most ancient of the sacred totem creatures. It would be interesting to speculate how far the biblical legend of the Garden of Eden contains some dim racial memory of intrigue and conflict between the tribal followers of those three creatures, in the same way that the early battles between Upper and Lower Egypt are reflected in the legends of Set and Osiris.

The last part of the Paleolithic Age is characterized in Palestine as elsewhere, by the appearance of vast numbers of microliths, and it is now established that this Mesolithic industry arrived at about the same time in Syria and Palestine. The tiny artefacts of geometric shape, mostly triangular points with blunted edges and squared ends, almost certainly fitted into holders of wood or bone for use as harpoons, or as hunting weapons in the form of spiked clubs ; others with serrated edges were used as saws, some of them having the characteristic high polish always found on the teeth of well-used sickle flints. It is an interesting fact that though the art of agriculture was entirely unknown to the Mesolithic peoples of Europe, the Natufians—as they are called in Palestine—were fully alive to the nutritive value of the wild wheat, barley and millet which grew abundantly in the Near East at that period. Whether they were the originators of agriculture, or whether they learned it from the Neolithic peoples of Egypt who were probably contemporary with them is at present unknown. In no other country has a Mesolithic culture left any signs of agricultural activity.

Skin clothing was now general, and numbers of bone needles and pins are found in the deposits. Pear-shaped beads of bone, animal teeth, and bone pendants were made up into necklaces, circlets, and skull caps, while the fan-shaped bone amulets found on the brow of one skull suggest that the effect of the evil eye was already feared and guarded against.

Pottery was still unknown ; gourds and bags of leather being still used for storing and transporting food and liquids. There is no evidence that the pressing of grapes or olives was known, but stone mortars were used for grinding corn, and basins cut in the floor of caves may have been used for storing grain. In one cave at El Wad the floor had been artificially levelled with a flint pick to a platform 1.50 cm. square. In the middle a stone basin with a flat rim and V-shaped section had been cut in the floor and two small limestone blocks set at right angles to it. To the right of this were three smaller basins, and to the north a series of roughly square limestone slabs set carefully side by side to form an enclosure. Immediately behind them a hollow trough was cut in the rock, with a burial nearby. Whether the basins were used for grinding corn and millet, or whether they formed part of some elaborate ritual for the dead is unknown. Burials, with the bodies in flexed position, surrounded with their most cherished possessions, and packed in with blocks of limestone, were associated with these curious basins and slabs at El Wad and Schubka, and may have been used for rites concerned with food offerings to the dead (out of which may have grown the " fellowship meal " shared with the Deity); or perhaps for some early form of the bloody sacrificial rites that played so large a part in the Canaanite and Hebrew religions of later times. Humble indeed were the beginnings of that urge to associate himself with the supernatural, which was one day to develop into the sublime conception of man as a spirit, and of a universal God Whose Law is Love.

Thus through the long Paleolithic Age, Man slowly and painfully advanced, until by its close, something upwards of 10,000 years ago, he had reached a stage in which the germs of a social order had been created. His food supply had increased in variety, the cold climate had taught him the advantages of clothing, and the primitive, isolated family unit had enlarged into something approaching a united community. Though still a half-nomadic, hunting creature there was already apparent in his culture the first hint of that new and revolutionary agricultural life which was about to dawn on the world.

With the advent of the Neolithic Age civilization everywhere took a tremendous step forward. With the domestication of animals and development of agriculture the whole structure of life widened. If in Palestine the only domesticated animal at first was the forest wild pig, it must be remembered that the cultivation of plants was more important, and pastoral peoples have contributed less to human progress than the agricultural communities. Once a man could sow and reap, population could increase rapidly, and a settled life become possible. Freed at last from the pressing problem of acquiring an assured food supply, and from the necessity of following the wandering herds he fed upon, Neolithic man found leisure and opportunity to increase his comforts, give play to his creative talents, and think about the universe he lived in. If his agricultural activities went no further at first than the most elementary hoe culture, nevertheless it enabled him to control his food supply and store up grain in the fat years against future need. He advanced in the technique of flint working. Though the Paleolithic flake methods went on, the scrapers, knives, awls, chisels and sickles set in bone and wooden handles, the quality of the work advanced and he made beautiful pointed lance heads and triangular arrows with a delicate retouch. He also learned how to grind stones to the required shape, finishing them off with a brilliant polish by rubbing them on blocks of limestone or special flint. Indeed the polished stone technique is the hall-mark of the Neolithic culture everywhere. This new technique naturally increased the range of stones he could use, and enabled him to chose the type most suited to his purpose; the excellence of the polish varying with the importance of the object, votive offerings and luxury articles receiving the most attention.

Who these new people were we do not know. Skeletal remains in the caves at the foot of Jebel Sunin, and in the caves at Gezer and elsewhere in Palestine show them to be short, muscular individuals, about five and a half feet in height, with slender, straight limbs. They had thick, long skulls of small brain capacity, rather flat-sided but well arched longitudinally; their foreheads had moderate brow ridges, their jaws were slightly prognathous with large molars and small chins. They somewhat resembled the Natufian skulls found in the caves at Athlit, and if modern prototypes in south Persia, Babylonia and Arabia are any indication, they had dark skin and fuzzy hair. Whether they were indigenous or came from outside Palestine is not known, but they were certainly not Semites. Mixed among them in the later stages of their occupation there seems to have been an intrusive, broad-headed taller type who may have been allied to the people of the Bronze Age.

The neolithic people of other lands lived in huts or lake dwellings, but in Palestine they must have lived almost entirely in the innumerable caves that honeycomb the hills, hence their archaeological name of "Troglodytes." Their remains are found at Gezer—type site—Megiddo, Lachish, Beth-Shan, Gerar, Ta'anach, Ophel, and numerous other places.

Caves have always played such a large part in Palestinian history that a short description of them is necessary. They abound in the limestone hills of Palestine and the Lebanon, and vary in size from small chambers to vast caverns hundreds of feet long. From the earliest times they have provided shelter for man and beast. In Neolithic and Bronze Ages they were used as dwellings, tombs, "holy places," and store chambers; while later still many were also taken into service as cisterns and stables. In the period of the Hebrew conquest (1200–1000 B.C.), the Israelites, when sorely pressed by the Midianites, made strongholds of them and retired into them (Judges vi, 2); while before the conquest of Jericho and the forts on the Plains of Esdraelon, the armies of Joshua must have occupied the surrounding mountain caves during the preparation of their assaults. At all periods caves were used as tombs and places of refuge. Lot (Gen. xix, 30), David in the cave of Adullam (1 Sam. xxii, 1), and the 100 prophets who fled from Jezebel (1 Kings xviii, 4) are examples. The Witch of Endor, whom Saul consulted, lived in a cave; and Christians used them when fleeing from persecution (Heb. xi, 38), their Christian symbols being still found scratched on the walls. Jeremiah (xli, 8) describes the use of caves as store-houses and secret hiding places for treasure. Even to-day those under the village of Siloam are used as stables, and in some regions the *fellahin* still live in them under conditions almost as primitive as did the Troglodytes.

The majority are of natural formation, though some were artificially enlarged or altered and a few actually made by the Troglodyte and Bronze Age peoples, who cut them out of the soft limestone rock with stone hammers and chisels. In the best known series at Gezer it is possible to trace in the successive levels of debris on the floors their history of occupation from the Neolithic period down to medieval times. They vary in size from 18 feet to 40 feet in diameter, and have roofs so low that a normal-sized person must stoop when moving about. Entrance was effected through a hole in the roof giving on to a narrow stairway cut into the side of the cave and leading to the floor. In some cases a sloping ramp replaced the stairs, while in others entry could only be made by means of a rope or rope ladder. In a few instances there seems to have been a tentative effort to close the entrance by means of some sort of door; but in the majority of cases there was nothing, though the inevitable inflow of rainwater may have been checked by a mud structure which has since disappeared. Fat-burning clay lamps, of the open saucer variety with a slightly pinched lip, lighted the interior, and were set in niches provided for the purpose. Some of the caves were divided into one or two chambers, roughly 8 feet to 10 feet square, used probably by one family only, but others are tortuous collections of chambers, up to as much as sixty in number, united by doorways and passages, and probably accommodating a large number of people. Some of the caves were set aside as holy and used only for religious purposes, or for tombs, while others were dwellings, or a mixture of dwelling and tomb, in which the family lived at one end and its deceased members were interred at the other, or just outside the entrance. As always, food offerings and his most cherished possessions were buried with the dead person, his near presence helping to create the illusion that he still dwelt with those who loved him.

It is possible that in Palestine, as in Europe, cremation and megalithic burials were both practised. In one cave at Gezer, under a large chimney aperture, a pile of ashes and burnt human bones suggests that the body was laid on the floor immediately under the chimney, the draught from which ensured that it was properly consumed by fire. But not all opinions are unanimous on this point, and further evidence is awaited. Dolmen tombs of neolithic or chalcolithic date exist on both sides of the Jordan, mainly on the eastern side. More southerly ones on the Sinai peninsula are of more recent date, and so are some of the stone circles east of Jordan, but the majority are undoubtedly early in origin. On the western side there are a few near Galilee, at Abu Dis, near Jerusalem, a remarkable group near Hizneh known as Kabur Beni Isr, others near Beit-Jibrin, while on the road from Shechem to Jericho, near a complete dolmen, there is an enclosure seventy-seven feet square composed of three courses of masonry, each stone of which weighs a ton or more. Within it a central monolith is surrounded by a stone circle twelve feet across, and stone alignments to a cairn are in the vicinity. Such circles are fairly frequent, known as *Gilgals* in antiquity and *Jiljiliyehs* to-day. There is a circle round the cave of Endor; others at Bethel recall the stone anointed by Jacob. Another on the road from Jericho to Jordan retains the name of the Gilgal where Joshua circumcised his people immediately after their entry into the promised land. By it is a sacred tree. In the basalt cairns south-east of Abel of the Maccabees were found flint flakes, cores, points, scrapers, and poor coarse pottery tempered with straw, all of early date.

As in Europe, megalithic structures are attributed by legend to a race of giants. They vary in type from a simple group of three upright monoliths overlaid with a stone slab, to elaborate chambered cairns. All were originally covered over with a mound of earth, often surrounded in Europe by one or more ditches. The majority have long ago been rifled, those in Palestine being subsequently used as shelters for shepherds and outcasts, or, in medieval times, becoming sacred to a local worthy buried nearby.

It is in the Neolithic period everywhere that pottery first appears, though the dating varies in different parts of the world. In Egypt it appeared much earlier than in Palestine, where the first crude efforts were of unrefined sun-dried clay which was useless for containing liquids. The potter's wheel was unknown, every pot being made by hand; the larger kinds laboriously built up from the base in sections, held together by grass cords until they were dry and hard and ready for use to store grain. However, the advantage of baking the pots by fire was presently discovered, or learned from elsewhere, and they were stacked in a heap and the fire built up round them. The difficulty of keeping up an even temperature by such a method resulted in uneven baking, in which often only the outside or one side of the pot was baked, the core remaining porridge-like and porous. The Palestinians always seem to have had difficulty with their kilns and though improvement was made, it was not until late in the Bronze Age that the art of proper baking was understood.

The characteristic Palestinian neolithic pot is the neckless, hole-mouthed jar—a type so favoured that it continued to be made right down to Hebrew times. There were also large store jars with ledge or wavy handles, used for grain, or for wine and olive oil which had first been pressed out in numerous rock-cut presses with the aid of stone rollers or pyramid-shaped stone pounders attached to a wooden beam, and then run off into stone vats to settle before storage. Small jugs were kept with these jars for ladling out the contents. Amphorae at first had no handles, holes being punched just below the neck for suspension; later one or more loop handles were attached. Cups, bowls and saucers were common and suggest the increase of civilized amenities. The characteristic saucer lamp, having one side slightly pinched into a spout, was to develop through the centuries until by Hebrew times the pinch had become a proper spout, and in Hellenistic times had changed into the familiar closed pottery lamp, with a central hole on top, a long spout, and a loop or flat handle.

For the decoration of their pottery the Troglodytes resorted to a rope-pattern finger moulding copied from the marks left by the ties originally placed round the unbaked pots, also rows of incised lines, shallow punch-holes and raised knobs. Sometimes a pale slip was put over the outside of the pot; and coloured decoration took the form of red drip lines, made by filling a reed brush with colour and allowing it to run down the sides of the pot. Basalt and trachyte bowls, and low table-stands of stone with three legs, found at Gaza and elsewhere, seem to have originated in the Jordan valley during this period.

The making of flint implements continued, as it has down to the present day when knives for sheep-shearing and razors for shaving are made on the spot by Arab peasants in Syria, used once and then thrown away. In the beginning each man must have made all his implements for himself, but later flint-knapping became a definite industry in Palestine. The Troglodyte made hoes, axes, chisels, borers, scrapers, and several fine varieties of flint knives, with one or both edges sharpened, some having serrated edges suitable for use as saws. They varied in length from 2 in. to 8½ in., the larger ones being used without handles, and the smallest ones set longitudinally in wooden handles to represent combs. Hunting weapons took the form of flint spearheads attached to wooden handles, and a cave drawing shows knowledge of the bow and arrow. Fish were caught by spearing them with a flint or bone harpoon, and probably also by net-casting from boats or floats of lashed reed bundles.

Agriculture was in the main the occupation of the people, though some hunting was still indulged in. At Tell Fara, examples of primitive barrel-shaped hoes have been found, as well as tentative efforts to make a flat, straight-sided hoe. By now, of course, cultivation was growing out of the hoe-culture stage; experience was bringing knowledge and the community was achieving a settled tribal life under the control of a tribal leader, and a priest or magician whose advice was sought in all matters of vital importance.

Of the religion of the Neolithic Age nothing is known, except that the chief deity was probably female—the all-powerful Mother-Goddess whose clay and stone figures appear in Paleolithic times. With the advent of agriculture, the Corn-Goddess and Earth-Mother became increasingly important, the figures of her male partner being at first fairly rare. Such male figures have been found in the earliest sites of Asia Minor and North Syria, but they were more slow in reaching Canaan.

The religious life of the community centred round the sacred " Place," more often than not a cave. At Gezer the " Place " was a roughly levelled surface covered with eighty-three cup-shaped holes, some eight feet in diameter and nine inches deep, others ranging down to as little as six inches across. These mysterious basins are found all over Palestine wherever there is an exposed surface of flat rock, and are of every period in history. The large ones are mostly circular, small ones often oval or rectangular. Their meaning and origin is still a matter for speculation, and they are found in other lands also, wherever the megalithic structures exist. That they had some religious significance—perhaps to hold food offerings or sacrificial blood—seems certain, and in later Semitic worship they are often found in conjunction with old pre-Canaanite sanctuaries, standing stones and High Places. The Well of Souls, under the sacred Rock at Jerusalem, the Cave of Machpelah at Hebron, the caves at Sinai, at Bethel and on Mt. Nebo all have these marks, and retained their sanctity in Hebrew times. At Gezer a space of rock in the middle of the city is thickly covered with cup-holes associated with curious caves into one of which empties a drain that may have carried the blood of sacrifice into the dwelling of the deity.

Nothing is known of the actual rites ; pig bones found at the bottom of the drain suggest that the pig was a pre-Semitic sacred animal. If so, this would explain the horror felt for it by the Hebrews, since the animal associated with a superseded deity is usually accounted unclean. Thus the association of the pig with Set had much to do with its execration by the later Horus-worshipping people of Egypt. It is interesting to note that in the XVIIIth Dynasty temple at Beth-Shan, the ancient Canaanite god of that city is shown wearing the clothes and headdress of Set.

Burial seems to have been mostly haphazard, the body being thrown into the funeral cave casually, but the presence of food vessels and offerings indicate a belief in an after-life which was the prototype of the material one. Belief in magic flourished, amulets now formed an accepted part of personal adornment, and by the Bronze Age became extremely varied in shape and function, invoking impartially the protection of

Canaanite and Egyptian divinities. Divination by various means, and the custom of consulting oracles before important events or in times of personal perplexity were firmly established.

The end of the Stone Age and the advent of the metal-using Semitic civilizations inevitably overlap, and it is almost impossible to draw a hard and fast line for either. The two must have existed side by side for some time, and at Gezer this is demonstrably so since a new invading people, knowing the use of copper tools, seem to have lived amicably among the Troglodytes until at last the latter became merged in their city civilization. But somewhere between 4000–3000 B.C. a tall, martial race appeared, known to us from biblical legend as the Amorites. Their speech seems to have had affinities with the ancient Semitic races of Arabia, and their civilization was far in advance of the humble neolithic tribes. Their size and their advanced culture so impressed the small Troglodytes that a legend grew into being, which was to persist through the ages, of the advent of a semi-divine giant race, sons of God who came and inter-married with the daughters of men. It is curious that this legend also occurs in connection with the appearance of the first metal-using peoples everywhere, who may or may not have been responsible for megalithic structures. In Palestinian legendry their chief city was Bashan and their king was Og, whose bed was fourteen feet long.

Their advent gave a tremendous impetus to the development of Palestinian civilization. Taking control of the strategic spurs and hill-tops (on which the more progressive neolithic peoples seem already to have settled in primitive mud-brick huts and skin tents, surrounded by a heavy protective earth wall faced and topped with field stones), they set about building the cities which were later to develop into the mighty Canaanite strongholds whose walls and towers, seeming to touch the very heavens, so dismayed Joshua's spies, and gave such tough resistance to his armies. Hazor, Beth-Shan, Ibleam, Ta'anach, Megiddo, Jericho, Ophel, Gezer, these and many others are familiar names in the Old Testament. Always to be the primary target of any invading army, their excavation has revealed a monotonous sequence of bloody destructions by fire and sword, and phoenix-like re-birth.

When the Amorites took possession of the neolithic hill-sites they found some of the walls in good order, and merely made minor repairs and additions; but in most cases they rebuilt them entirely, erecting, sometimes on the foundations of the old walls and sometimes outside them, stout walls of sun-dried brick on rubble foundations, twenty to forty feet high, averaging up to twenty feet wide at the base, and twelve to sixteen feet at the top, with a characteristic bulge in the centre due to the absence of weep-holes in the construction. At least two passage gates were customary, flanked by buttresses and huge brick towers bonded into the wall and projecting some feet beyond. Other towers at regular intervals, sometimes standing free from the wall, surrounded the city. How the gates were closed is not known, but some form of wooden portcullis was probable. Sometimes, as at Gezer and Jerusalem, one gate passage was given a right-hand turn, the other remaining straight; and they were lined with large limestone slabs to prevent the soft brickwork from being worn away by the constant rubbing of pack-laden animals. Near the main gate usually stood the king's palace and other important buildings. At Gezer, beneath the courtyard of the palace lay the entrance to a great water tunnel, which ensured a supply of water to the beleaguered city in times of siege. Whether it was made by the Neolithic people or the early Amorites is uncertain. Cut down through the soft limestone rock with flint chisels and hammers, it is in reality a gigantic staircase 219 feet long. The entrance is 13 feet wide and 23 feet feet high, and the barrel-shaped roof follows the line of the staircase which ends at a powerful spring with a very deep pool about 95 feet below the rock surface. The tunnel itself continues beyond the pool and ends in a natural cave which may have been the abiding place of the deity of the spring. The debris closing the tunnel contained Late Bronze Age sherds of about 1400 B.C., but Mycenaean sherds found in the general filling of the passage suggest that it went out of use between 1800–1500 B.C., the steps having become too worn to be safe.

Tunnels, often linking a hill city with an outside water supply were constructed in Palestine at all periods. On Ophel, the Jebusites cut a passage through the rock to a chamber over a deep shaft, at the bottom of which a passage descended for 125 feet to a spot where buckets could be let down a 40 foot shaft to the water which had been carried back 50 feet from Gihon by a channel through the rock. It was up this water passage that Joab climbed to admit the armies of David into the city. Later Hezekiah made another tunnel from the Pool of Siloam to the spring now known as the Virgin's Fountain. Another at Es-Salt is of earlier date, and yet another at Gaza, apparently unconnected with water, leads 500 feet out into the open plain. At Lachish, one, of 700 B.C. construction, was left unfinished so that we can only guess at its purpose. Inside the cities large official cisterns for water conservation held as much as 600 gallons.

What surprises us, in light of the biblical assertion of their great size, is the limited area these cities actually covered. Hazor, the largest, being only 15 acres in extent, Jericho 6 acres. Within the encompassing walls the city population lived huddled together with their armies and their animals. The rich had luxury without comfort, and the poor, as always, knew only squalor. Narrow, unlit, tortuous streets, sometimes paved or cobbled, and usually only about 7 feet wide, were lined by huddled mud-brick houses built to no plan, but by each man as it pleased him. The palace was a complex of mud-brick rooms surrounding a large courtyard, but the house of the ordinary individual usually consisted of one, perhaps two rooms, as they do to-day. In fact the unchanging method of house construction in Palestine makes it almost impossible to date house foundations except by objects found associated with them. The joints were poor, doorways small and without jambs, but with a stone or wooden lintel. Doors of wood swung on horns projecting at top and bottom fitted into stone sockets. Windows, if there were any, were probably filled with wooden lattice work as to-day ; window glass does not appear until Roman times. Wooden beams supported a flat roof whose top dressing of mud was kept flat with a stone roller, a custom which still survives. In the more well-to-do houses, when rooms were too large to be spanned by a single beam, central wooden pillars were set on stone bases which prevented them from sinking into the beaten earth floor. Walls were plastered and painted in simple colours. Private cisterns were cut in the rock to hold the family water supply, and numberless rock-cut presses and vats testify to the lavish production of wine and oil, which was kept in large storage jars of pottery embedded in the floor in a corner of the living room. These, and hearths of up-ended stones, are all that remain to us of any Amorite furnishings except long stone or earth benches along one side of the rooms, which were probably used for sleeping on to get above fleas that were certainly no less ubiquitous then than now. Existence was still extremely primitive, and ideas of sanitation were non-existent, though occasionally a more enlightened house-owner dug a small trench which led into the gutter outside his house, where the sewerage soaked away at leisure. Pariah dogs and goats were the only scavengers. In the summer heat the narrow high-walled streets inside the great city walls must have been almost unbearable, and pestilence found easy and frequent prey.

Cultivation of the fertile soil outside the city constituted the chief occupation, and domesticated animals now included the cow with the long horns, sheep, goats and pigs. Fowls were as yet unknown, but geese were probably kept. The donkey was the only carrier, any sort of wheeled vehicle being unknown, indeed could not have passed along the narrow city streets.

Summer crops are a modern innovation, but the winter crops were the same as to-day, wheat, oats, barley, beans, bamieh, vetch, and fruit, including the fig, pomegranate, grape, olive, pistachio nut, terebinth seed and acorn. Beasts were fed on chopped straw. A simple form of plough had been borrowed from Egypt. Sowing was by hand, and the harvest reaped with a sickle made of flint teeth set in a wooden or bone handle, or in the jawbone of an animal. Threshing was done by means of a sledge whose bottom was filled with sharp stones, and the grain winnowed with a wooden fork. Flour was ground in saddle-shaped querns, and bread and round cakes baked in cylindrical mud-brick ovens. Meat was boiled in large, wide-mouthed pots, served in dishes and ladled out with bone-handled spoons. Water, lifted from the cistern by jugs and poured into waterskins or large jars, was carried, as to-day, on the heads of the women, or fixed on either side of a donkey.

Heavy loom weights and enormous quantities of spindle whorls indicate that spinning was a regular industry, but the presence of bone borers also suggests that skin garments were still in use. Needles and pins of bronze were preserved in bone needle cases, buttons were round and pierced with two holes ; the poorer classes making theirs out of broken pottery, the richer using bone and ivory. Jewellery was still fairly rare, the common adornment being necklaces of limestone, crystal, quartzite and carnelian, while towards the end of the early period, green and yellow glazed beads were imported from Egypt.

Excavation is clearly establishing the fact that connections with Egypt, and the infiltration of Egyptian influence, began very early indeed. A fine carnelian necklace of VIth Dynasty style, associated with entirely non-Canaanite pottery, was found in the chalcolithic level at Gaza, and other objects have come to light elsewhere. It is certain that Egypt had already begun to look outwards, and had set her eyes on Palestine. In the tomb of Ne-user-re, a Pharaoh of the VIth Dynasty, there is the pictured record of an expedition against Canaan, the capture of the Semitic town of Netia—perhaps Lydda—and the carrying off of captives. In the temple of Sa-hu-re of the Vth Dynasty are similar scenes, showing booty from foreign expeditions, among which are Syrian bears and olive oil in Canaanite jars. The prisoners wear short trunks and headbands. Recent excavation in Syria is also bringing additional evidence of far-reaching Egyptian influence and trade contacts.

With the introduction of the potter's wheel ceramics took on a new quality. Shapes grew more symmetrical, and the clay was more refined ; ground limestone or quartz being added to give consistency and hardness. Though the art of baking was not yet fully mastered, the advantages of the closed kiln were known, and the pots were better baked in spite of the fact that the core still remained black while the outside was drab yellow or reddish. All the neolithic shapes continued, but with better execution, while a number of new shapes appear, notably a large handle-less jar with pulley-shaped neck, bowls with or without handles and spouts, basket and loop-handled jars, and jugs with stump or pointed bases which continued down to Hebrew times. A fine cream-slip ware of the period was first found at Gezer. Decoration on the Early Bronze pottery chiefly consisted of burnishing and combing. The combing was done on the soft clay before baking, with a very fine comb probably of bone, and the burnishing was done by hand with a smooth pebble, producing a glassy surface that took the place of Egyptian glaze in making the vessel less porous. The same technique is found on Naqada ware in Upper Egypt. The old neolithic types of decoration continued, but in more refined form, the drip lines giving way to carefully painted vertical or horizontal lines, zig-zag or basket patterns. Irregular blobs and dots, circles and triangles between parallel lines, and matt surfaces on painted ground were popular. Though no human or animal figures appear in the decorations, rude human and animal figures were modelled as handles on pottery. Cakes of paint—iron oxide for red and limonite for yellow, with occasionally blue and green—were ground and mixed on stone palettes as in Egypt and Mesopotamia, and laid on with a reed brush. Stone bowls imitated pottery originals, and potters' marks appear in numbers, having a striking resemblance to those of Egypt and Naqada of about 5000 B.C. thus forming a link of great significance between the early Bronze Ages of Egypt, Naqada and Palestine.

Though the first Amorites made spearheads, knives, daggers and chisels of copper hardened by hammering, the copper, or Chalcolithic, Age, is poorly represented in Palestine, and could not have lasted long. Somewhere before 2500 B.C. another influx of peoples from N. Syria, bound for the conquest of Egypt, swept away the use of unalloyed copper and introduced the smelting of bronze. In the south, however, there seems to have been no metal working, and the use of flint remained general until the beginning of the Iron Age.

The reason for this may perhaps be found in 1 Sam. xiii, 19-22, from which we learn that no smith was found in Israel because the Philistines feared they might make weapons for themselves.

But in all other parts of Palestine smelting became well-known, the liquid metal being run into pottery and stone moulds. Swords and daggers, with affinities to Syrian and Asia Minor types, appeared, and the growing standard of luxury is illustrated by the increased use of jewellery. Bangles, anklets, girdles, toggle pins, beads and rings of bronze and silver were worn by all but the very poor, who still made shift with ornaments of shell and stone. The more beautiful types of stone such as quartzite and carnelian were also worked into beads and girdle fasteners. Ivory and bone inlay for boxes, and a blue glaze box at Gezer imported from Egypt, are further evidence of expanding civilization. That gold was known to the Amorites and early Canaanites is certain, but the tomb robber, the constant destruction of cities, and the depredations of later generations who cleared out ancient tombs in order to use them again, have all combined to prevent much beyond a few gold beads from surviving.

Opinion leans towards the theory that it was the amalgamation of the Amorites with the North Syrian invaders which produced the Canaanites of biblical tradition. They rebuilt the hill-cities, erecting new and more powerful circumvallations of brick, or sometimes of stone in the cyclopean tradition, strengthening them with huge buttresses and towers (Deut. i, 28; ix, 2). Even the walls of the palaces and public buildings were of immense thickness testifying to the dangers of a period when the pressure of Egypt from the south and of Syria from the north was increasingly menacing.

It seems to have been the Amorites who introduced into Palestine the cult of the sacred pillar or monolith. Representing the tribal deity, it was set up in some ritually clean spot—often a cave—with a limestone altar nearby which had been profaned by no tool (Exod. xx, 25). At Gezer this sacred "Place" consists of two caves, in the first of which stands the stone altar. When found it was still bearing the tiny skeleton of an infant; perhaps the last desperate sacrifice as the invaders stormed the gates of the city. Connected with the first cave, but concealed from view by a narrow passage, through which only the priest would be allowed to crawl, is the second cave, probably the abiding place of an oracle. Near the passage stand two pillars, male and female ; the top of the female one being worn smooth by the kisses of ancient worshippers, suggesting that the cave was the abode of a female deity to whom the greater honour was paid. Round the pillars is an open space, partly paved and partly covered with limestone chips. South and north are the remains of circular structures, and the bronze model of a cobra found nearby suggests they were pits for the sacred serpents, which again gives colour to the suggestion that the caves were dedicated to a female deity. Throughout the world serpent-worship is found among all the early religions, and survives to-day in sacred myth and legend. Its exact origins are not yet known, but it seems to have come in everywhere with the megalithic peoples, and to be primarily associated with a female deity. A bell-shaped cistern 16 feet deep on the east of the cave, and surrounded by cup-marks, was found to contain sacrificial refuse, the bones of cows, goats and deer being mixed with human remains. The area surrounding is so filled with the bodies of new-born infants pushed head-first into large two-handled jars with pointed bases, and covered over with a bowl and small jug, that the sacrifice of the first-born was clearly an important Canaanite rite, later adopted by the Hebrews to whom it was finally forbidden. Similar infant burials served at all periods as foundation deposits under the corners of houses (1 Kings xvi, 34), and under city and palace gates. Nor were adults exempt from this doubtful honour, which was accorded to them from the Nile to the Euphrates. In fact, though still holding traces of the old nomad nature worship, from now on Palestine was destined to reflect a hotch-potch of foreign religious ideas and influences, out of which nothing of its own appeared until the rise of Hebrew monotheism.

Though the images of deities were still largely rude clay figurines of the great Mother-Goddess, definite identities begin to emerge for us. The chief female deity seems to have been a local form of the Mesopotamian Ashtoreth, and her consort, who functioned under a number of names—Merkal, Ba'al and the Philistine Dagan—seems to have been a form of the little known early god Reseph, and figures of him were extremely rare at first. But by the end of the Bronze Age he had begun to be represented more frequently, and the figurines of Ashtoreth were everywhere. Egyptian deities were also worshipped, probably at first only by settlers from Egypt, or resident Egyptian garrisons in the chief cities, but later they seem to have enjoyed more general popularity, though it is probable that the humbler strata of the people remained, as in other lands, faithful to the primitive gods of their own locality. But the ritual celebrations were probably in the main much the same for all deities. At seed time and harvest, in times of battle, pestilence or famine, and on days of rejoicing, the appropriate rites and ceremonies included processions and sacrifice, and sacred dances of a descriptive type. If some seem very gross to us, it is because we look at them from a more evolved standpoint than do primitive people who merely describe in their ritual dances the natural forces they worship and wish to honour. Many of these Canaanite customs were taken over by the Hebrews, David's fertility dance before the Ark (2 Sam. vi, 16), incurring the scorn of his more orthodox wife Michal. The religious custom of offering the deity a kid boiled in its mother's milk had certainly a Canaanite origin, and to-day is still considered a special dish for an honoured guest.

The period succeeding 2000 B.C. is much better represented in excavation than the preceding centuries. Tell-el-Hesy, Ain Shemesh, Megiddo, Ta'anach, Gezer, Tell Fara, Beth Shan, Gerar, Ophel and Jericho and the Shephelah Tells have all yielded a great amount of material. We find now a civilization which, while it continues the high Canaanite tradition of the Early Bronze Age, also contains new features. New methods, as well as slavish imitations of foreign imports, all show a widening contact with neighbouring peoples, and the early Amorite characteristics practically vanish. It must have been an extremely active period with considerable commercial growth. A period of war-like activity and national consolidation. The chief cities were rebuilt or refortified once more against foreign invasion. The power of Egypt was creeping up from the south and establishing itself in the cities of southern Palestine.

During the strong XIIth Dynasty, the firm Egyptian control of Palestine seems to have been widespread and peaceful. That the times were in consequence less dangerous is amply illustrated by the fact that the new city walls and main buildings were of thinner construction, and the spread of trade and civilization very marked. During the first Canaanite development building had improved in quality, bricks of good yellow clay being generally used for all important work. The standards of luxury had gone up, the palace at Gezer containing a bathroom and a privy, the former being a room with a sloping floor, down which the water drained into a large jar. Egyptian alabaster vessels containing perfumes and unguents were imported, also kohl pots, scarabs and seals, glazed ware, beads, rings and cult objects. Babylonian weights show contact with the Euphrates; fine gold granular work from Syria, gold hair-rings, gold and electrum toggle pins, silver head-bands, finely carved quartz girdle fasteners, and so on, all make it clear that the standard of culture was almost, if not quite as high as that of some 2,000 years later. That Palestine was always a rich land is shown by the enormous amount of booty always carried off by the conquering monarchs of all periods. In the famous tomb at Beni-Hasan, Semitic Princes are shown bringing rich gifts to Senusert III of the XIIth Dynasty. The men wear sandals and kilts of brightly woven linen or wool; their hair is "bobbed," and they have short pointed beards. Their wives—or perhaps they are choice slaves sent to Pharoah—are bare-footed, clad in long cloaks of similar weave leaving one shoulder bare. On their heads are long wigs of Egyptian style bound with a circlet of bronze or some woven material, or perhaps even of silver or gold.

At what date exactly the Hyksos invaders entered Palestine is not known. Somewhere at the end of the Early Bronze Age, probably before the end of the XIIth Dynasty, this barbarous, war-like horde swept down from Asia Minor and across Palestine on the way to conquer Egypt. City strata everywhere now show signs of violent overthrow, conflagrations, and general chaos. The Egyptians were driven out and the conquerors established themselves in authority. Once more new cities rose phoenix-like upon the ruins of the old, but with a return to the older style of massive walls and huge towers of brick. An innovation was added in the form of a steep glacis sloping from the base of the walls to a deep encircling ditch.

But perhaps the greatest innovation was the introduction of the horse and the war-chariot. Both were hitherto unknown in Palestine and Egypt, and it is easy to picture the consternation of the Egyptian and Canaanite armies when faced with so new and terrible a war machine. There seems ground for believing that the horse was regarded as a sacred animal by the Hyksos. At Gaza the remains of a sacrificial horse-feast was found, and horses were also accorded special burial in private graves.

The Hyksos brought no culture of their own, merely adapting the existing civilization to their own ideas, but their burial customs were different. The old Canaanite habit of throwing their dead casually into a cave without regard to orientation or posture was replaced by the introduction of pit tombs with loculi, i.e., shelves on which the dead were laid at full length or with knees bent. Sometimes coffins of thin wooden planks were used, and the bodies were usually orientated east or north. Scarabs bearing the name of Hyksos kings and mounted in gold were sometimes laid on the hands or stomachs and the usual deposits of pottery and weapons placed nearby.

Despite wars and alarms, however, the general life and common customs of the main population continued, as always, undisturbed in its essentials. The expiatory punishment of Achan (Joshua vii, 24) was strikingly paralleled by the discovery of a similar happening at Gaza during the Hyksos occupation. Caught in the act of some terrible crime the culprit had suffered the same drastic penalty. Objects of silver and ivory, pottery vessels, basalt tripods and alabastar jars had all been deliberately smashed to fragments and burned in a pit. Thus long before the advent of the Israelites the habit of absolving a community from the curse of a great crime, by destroying the entire possessions of the criminal, had been known and practised. Ablution before prayer, that indispensable adjunct to the religions of Judah and Islam, was also known to the Canaanites, for at Gaza was found the remains of a shrine with a platform of shells nearby, on which the ancient worshipper washed his feet, the water draining into a stone-lined pit. The cleansing over, he stepped on to a clean stucco floor, and into a lobby leading to the inner shrine which had a plain white plastered floor and walls.

Early Bronze types of pottery did not entirely disappear; burnishing continued merely for decorative purposes, since the improved baking had largely done away with its necessity. Mostly in the form of bands, it survived down to 600 B.C. New shapes came in which are typical of the Hyksos period, notably a polished black ware with white-filled punctuations, and pear-shaped juglets with a button base and two-strand handles. Also bowls with trumpet-shaped bases of Cypriote type, or on three legs, which were the precursors of the pedestal bowls of the next period, and the libation vases of the Iron Age. Braziers or chafing dishes, 8 inches to 17½ inches high, in the form of cylindrical pottery tubes with expanding foot and moulded rim top are found usually in association with the Egyptian cup and saucer lamp. Spouts began to be common on jugs and bowls, being longer and narrower than heretofore.

Imported Mycenaean ware was imitated, especially the Mycenaean frieze and metope, with figures of birds, fishes and animals separated by bands of zig-zag lines. Human figures were still rare, but trees were common. Other decorations included rings round the vessels, ladders, trellis and fret patterns. Towards the end of the period Cypriote imports began, including open, yellow clay bowls with wish-bone handles, decorated with bands of lustrous orange-red paint or black slip with red stripes.

Whether or not the much discussed " Hyksos " scarabs were brought in by them is uncertain. Many of them are adaptations of existing Egyptian forms, others are of Mesopotamian type. The use of seals in cylinder or scarab form was so common over the entire East that it is quite probable the Hyksos brought some of their own ideas and copied others. Their chief value lies in the fact that they are distinctive, and therefore the best dating material wherever they are found. It was during the Hyksos period that the entry of Abraham into Palestine probably took place.

With the close of the Middle Bronze Age and the beginning of the Late Bronze Age, the Hyksos domination came to an end. Egypt threw off her yoke, and by a series of bloody battles drove the Hyksos out of Egypt and out of Palestine back into their northern territory. Now began the great period of XVIIIth Dynasty Egyptian Imperialism when the conquests of Thothmes III carried the power of Egypt from Nubia in the south to the Euphrates valley in the north. Again the luckless Palestine cities were rebuilt, and another tremendous expansion of trade and prosperity began. The Karnak temples of Thothmes describe the almost incredible amount of gold and booty that he brought back from his campaigns, and the pictured scenes provide valuable information about the high civilization and wide international trading of the times. It is during the Middle Bronze Age that Mycenaean and Cypriote influence become so great. The Cretans were still in the hey-day of their power and the products of their matchless potters and metal workers were being carried in Cretan and Egyptian ships all over the Near East. Cypriote pottery and bronze weapons were also freely imported, and copied in Palestine with the usual indifferent talent. Egyptian glazes, inlaid jewellery, bead collars, unguents, alabaster vases, amulets and statuary flooded the land of Canaan, together with Egyptian deities and Egyptian customs ; all to suffer the same prolific and mediocre copying.

At Beth-Shan, with its many city levels, the ninth stratum is dated to Thothmes III and contains the remains of two temples built side by side over the site of an ancient Canaanite High Place. The larger and more southerly one seems to have been dedicated to Merkal, God of Beth-Shan, a name previously only known from a Phoenician inscription in Cyprus identifying him with Reseph. It was 128 feet long and somewhat wider, and was built of yellow Canaanite brickwork. A large courtyard contained a stone socket for a pole with a sacrificial knife nearby. A brick table-like structure in the middle, the skeleton of a three-year-old bull and a heavy bronze pendant with a bull and lion motif, all found in the courtyard help us to reconstruct what must have been a familiar scene to the inhabitants of Beth-Shan when, on the appointed feast-days, worshippers were admitted into the courtyard, and the young bull, garlanded and wearing the bronze pendant of the deity, was paraded before their admiring eyes. In Egypt the Apis Bull of Memphis, the Mnevis of Heliopolis and the Buchis of Hermonthis were similarly led, while the ritual sacrifice of a three-year-old bull was practised by the Hebrews. The parade over, the bull was tethered to the post, slaughtered with the bronze knife, and its blood caught in sacred vessels and offered to the deity. After which it was dismembered on the brick table and roasted, all but the sacred portions being given to the gathered people to eat. The parts set aside for the deity were offered inside the temple by the priests, who afterwards ate them (1 Sam i, 18 ; ii, 14).

In the yard were also found hollow pottery cones with flaring tops which may have once been surmounted by little copper bulls, as were similar Mesopotamian votive offerings. Figurines of Ashtoreth with either the Babylonian scalloped headdress and bracelets, or nude and wearing an Egyptian wig the Uas sceptre in her hand, as well as Syro-Hittite cylindrical clay incense altars, scarabs and figures of Ptah, all found in the courtyard, illustrate the lack of bias displayed by the Palestinian worshipper.

Entrance to the temple was by a flight of steps to a south corridor reserved only for priests. Here a sacred " mazzebah " —a basalt column shaped like a cone on a base of unhewn stones—represented the god Merkal. Nearby, the Egyptians, who could hardly be expected to understand a god in this form, had erected a pedestal on which stood a stela with the sculptured figure of Merkal. Thus in this corridor we find the unique combination of a temple and an ancient Canaanite High Place (represented by the mazzebah and libation bowl), as well as the interesting example of the transition of the god from pillar form to human representation. In the stela Merkal is seated on a throne with the Egyptian Uas sceptre of happiness in one hand and the Ankh symbol of life in the other. On his head is a Babylonian helmet of a type worn by Set (in the XIXth and XXth Dynasties), and he is also dressed like that deity. Remembering the association of the pig with the Neolithic High Place, and with Set, an interesting number of queries arise. Moreover, since Reseph was the Ba'al of Beth-Shan during the XIXth dynasty his connection with Merkal also seems certain. During the Philistine occupation of the city his name changed to Dagan, and it was in his temple that the head of Saul was hung (1 Kings xxxi; 9).

At the west end of the corridor five balustraded steps led up to a great stepped altar, with a baetyl nearby which had once probably stood on it, showing that with the Canaanites, as with the Egyptians and the Hebrews (1 Kings x, 19), the gods and kings ruled from their seats on the top of a flight of steps. Similar altars are known at Al Ubaid, in the Hatshepsut temple at Deir el Bahri, and in the river and tomb chapels of Amarna.

Near the altar was a circular fireplace for roasting sacrificial animals, also store chambers and a well 42 feet deep. In another chamber near the steps a stone bench and a socket for a post suggest that here lodged the temple guardian, with his fierce dog tethered to the post and just able to reach any unlawful intruder who approached the sacred steps. Such temple guardians with their dogs were known, and dogs were often buried under door-sills to protect a house.

Next to this temple stood the smaller one probably dedicated to Ashtoreth, which contained evidence of the practice of ophiolatry. As she was also a war goddess, Saul's armour was hung in her temple by the Philistines (I Sam xxxi, 10).

The Late Bronze Age cities continued the general standard of life. There was no great change in the construction of houses though here and there evidences are found of primitive drainage in the form of pipes made by thrusting the neck of one pottery jar through the base of another. Streets, too, were more frequently paved, while in Beth-Shan the main street appears to have had a vaulted roof and probably formed part of a bazaar. The earliest example of an arched roof in Palestine occurs in a house nearby. Terrible as were the wars waged by Egypt, and great the loss of life and property, in the end it was less than that caused by the never-ending strife between local kinglets. Under strong Egyptian control wars ceased; the fields could be cultivated in peace, and intercommunication within a great Empire brought a vast increase of wealth to the merchant class. Local rulers and governors kept order, and successors were chosen from the royal house, the oil of anointing, or a ring being sent by Pharaoh. Intercourse between Egypt and the Phoenicians resulted in a wide range of foreign goods being exchanged by those indefatigable seafarers for products of the Egyptian Empire. The wealth of Palestine and Syria must have been enormous. Among the booty captured, and tribute claimed, by the XVIIIth Pharaohs, are mentioned chariots wrought with gold and electrum and drawn with golden poles, a golden horn inlaid with lazuli, a bronze corselet inlaid with gold, silver statues with heads of gold, chairs of ivory, ebony and carib wood, dishes of gold, tables of ivory and carib wood, a sceptre of carib wood wrought with gold and costly stones, vessels of iron—then a rare metal, ingots of gold and silver, bronze daggers and knives, wine, oil and honey. Whatever the lack of inspiration in her creative powers, Palestine could claim that in wealth and luxury she held no mean place among the nations.

With the end of the Bronze Age, however, the period of Egyptian domination ended, never again to be so complete. Rival factions rose in revolt, challenged her power, and once more blood and strife was Palestine's lot. The vast movements of sea-peoples and others from the north, all driven by some inexorable force southwards, occupied Egypt's attention, Crete and the Hittite empire vanished under the tidal wave of war never again to re-appear in the old form. It was a period of complete and far-reaching changes. About 1300, a part of the vanquished sea-people, driven back by Rameses II, settled on the coastal strip of Palestine, and as the "Philistines" brought a new stream of culture and influence into that sorely-tried land. They were culturally an advanced people, expert craftsmen and builders, whose aid was later sought by the luxurious Hebrew monarchs for the construction of their cities, and the manufacture of their weapons. Philistine pottery is beautiful and distinctive, finely baked, the shapes pleasing, and the painted decorations based on Cretan motifs. Even though they were in the decline rather than in the hey-day of their cultural powers, their products far surpassed anything hitherto found in Palestine. At first occupying only the coastal strip, they presently set about capturing the main Canaanite cities. They seem to have left the Canaanite population in occupation as tributaries or bondsmen, and the fact that they forbade smiths to practice their trade in the southern part of Palestine suggests that it was they who controlled the import of bronze and iron, and by keeping their vassals unarmed successfully insured themselves against revolt.

At Beth-Pelet were found five large tombs in a row with stairways leading down, which may have been the burial places of the " Lords of the Philistines," a title held by the city rulers down to 1050 B.C., when David's rising power closed the period of Philistine domination. Pottery coffins of XVIIIth dynasty type were also found in the Philistine cemetery outside that city. In slipper form with detachable lid, their interest and value lies in the fact that on the lids are modelled human features giving us the first portraits of these " Seren " or Lords of the Philistines. They had large aquiline noses, short beards on the lower lip, and plaited side hair. Some of the coffins were painted, and whether they derive from the Egyptian anthropoid coffins or from the Mycenaean gold masks which were placed over the faces of the dead is not known. Heavy gold earrings and beads, a steel dagger similar to one in Tutankhamen's tomb, finger rings of lead and iron, and bronze bowls of a type which appear in the Ramesside period were among the burial deposits.

The date of the Hebrew entry on the scene is still somewhat uncertain, the evidence so far available suggesting that Joshua's conquest of Jericho must have occurred not later than the beginning of the Iron Age, about 1200 B.C. The biblical description of the falling walls has been amply confirmed by excavation. A sudden collapse undoubtedly occurred, in which the masonry of the walls fell outward and down the hill-slopes, though whether this was due to earthquake or to the tramp of Joshua's army must be left in question. That the battle was bitter is certain, and a terrible conflagration followed in which houses were reduced to masses of reddened brick, charred timber and ashes. So complete was the holocaust that for two centuries after the ruins remained uninhabited except by a few peasant squatters. This is in accordance with biblical tradition (Joshua xvii, 14–18). Ta'anach seems to have shared the same fate. Lachish, Ain Shems, Gerar and Beth-Pelet were also conquered about the same period, but Zion and Gaza show no trace of Hebrew occupation until about 1050–950 B.C., indicating that the conquest of Palestine was slow and difficult. At first, like the early pioneers of the western world, the incoming Israelites seem to have cut down the forests, and cleared tracts for farming and villages, only overcoming the Canaanite fortresses gradually.

That these immigrant nomads brought any culture with them is hardly to be expected. The old Canaanite civilization was already in decay, and a complete deterioration of all the arts could only be expected, though the contribution of the Philistines to some extent redressed the balance. The only contributions the Hebrews made were their simple desert customs, and their religious organization.

With the rise to power of these nomad people, the Canaanite civilization more or less vanished, the struggle between Philistine and Hebrew thereafter taking its place. But at first the young monarchy had no aspirations to a national culture, and borrowed eagerly whatever took its fancy. From the Canaanites it took over almost wholesale the old rites and ceremonies, including the standing stone and the High Place; the worship of golden calf and serpent, the bloody sacrifice and the fellowship meal. Nominally worshipping only one tribal God, there was no objection to presenting him in a variety of forms closely associated with Canaanite deities. From Egypt and the Philistines it adopted, and copied badly, the manners and customs of secular life, including fashions of clothing, jewellery, pottery, and arts and crafts in general. Wealth seems to have been quickly accumulated, and from the Hebrew-founded city of Samaria we obtain a very clear picture of the gilded luxury which the Hebrew monarchs from Solomon onwards enjoyed. Determined to have a capital worthy of him, Omri founded Samaria and built himself a temple, as well as a palace on the usual oriental plan of a large courtyard surrounded by rooms, which his successor Ahab enlarged so that it must have resembled the great Assyrian palaces. The discovery during excavation, of hundreds of ivory fragments among the ruins, suggests that this was the famous ivory palace. Though not actually built of ivory, some parts of it, perhaps his private apartments, were probably panelled with ivory, and the furniture inlaid with it. During the first centuries of the first millennium B.C. ivory was everywhere used on a fantastically lavish scale. Ivory objects form a prominent part in the Assyrian inventories of spoil, and the recovery and study of carved fragments in Palestine, Syria and the Mediterranean Islands have given rise to the theory that there were several distinct schools of ivory carvers, the main one being Syrian. That elephants roamed Syria and the Trans-Jordan as late as 1501–1447 B.C. is testified to by an account of a hunt left by two officials of Thotmes III. Sargon of Assyria also had a " house " of ivory, and Nebuchadnezzar of Babylon an ivory door to his chamber of repose ; while according to Ezekiel xxvii, 6, the Tyrians even had inlaid ivory on the decks and benches of their ships. Houses had cedar-lined rooms inlaid with ivory panels. Stools and tables of ebony were inlaid with ivory, couches of ivory were covered with gold, handles of weapons, beads, statuettes, statue inlays, bottles, vases, and boxes were either entirely of ivory or lavishly decorated with it. By 600 B.C. the elephant was, not surprisingly, extinct in the Near East, though some use was made down to medieval times of local finds of ancient mammoth ivory for objects of lesser value.

In the carved fragments at Samaria the designs were mainly of Syrian iconography in Egyptian guise. The later Hebrew aversion to representational art and foreign motifs had not yet begun. From Megiddo, Lachish, and Beth-Pelet, other specimens of ivory work have been recovered, notably an ivory perfume flask at Lachish in the form of a woman with a detachable spoon headdress, after Egyptian and Babylonian perfume flasks of similar design.

Of Samaria itself, the remains of a colonnaded street, houses, shrines, two palaces and a temple were uncovered, the style of masonry being Phoenician. Fine pottery, in the form of straight-sided circular bowls decorated with concentric circles, has been found both at Samaria and Megiddo. Foot-baths of oval shape in red burnished ware with a central foot-rest in the centre, found at Samaria and Gaza, seem to have been used for ritual washing. At a modern village near Samaria round ones with similar foot-rests are still made and used for the same purpose.

The reconstruction of Jerusalem after its capture by David (1 Chron. xi, 5–8; 2 Sam. v, 9), and the account of the building of the great Temple there by Solomon (1 Kings, v–viii) are too well known to dwell on here. The site occupied by the latter is still undecided, though the Dome of the Rock is said to cover it. So completely did Titus destroy it that all attempts to reconstruct it from biblical description alone have so far failed. Small though it was when compared with the great Greek and Egyptian temples, or with modern cathedrals, it is clear from the Old Testament account that Solomon brought to its construction all the resources of wealth at his command, and called in the finest of Phoenician craftsmen. It is interesting to note that the use of iron tools was at first avoided in connection with all such religious undertakings (Exod. xx, 25; 1 Kings vi, 7), probably due to the fact that iron was introduced by the hated Philistines and therefore profane.

Once the monarchy was established it was not long before oriental lavishness and voluptuous living characterized the king's court. There could hardly have been a greater contrast than between Saul, the tribal sheikh, and Solomon, whose glory and extravagance were a by-word. Gold was everywhere, silver as stones "nothing accounted of." The description of Solomon's palace (1 Kings vii, 1–12) is a piece of frankly vulgar ostentation, as is also the account of the fabulous riches which so impressed the Queen of Sheba (I Kings x). In 1 Kings iv, 26 and x, 26, we read that he had fourteen thousand chariots, twelve thousand horsemen and forty thousand stalls for his horses. At Megiddo, Beth-Shan, Ta'anach, Tell Fara and Lachish have been found the remains of some of these great stables, some capable of holding 200 horses.

Equally extravagant was the life of the wealthy classes at whom Amos lashed out so furiously in condemnation : " Woe to those who are careless in Zion, and secure in Samaria's mount, who make themselves chiefs of the nations and spoil Israel's house for themselves, who recline on ivory couches and stretch themselves on their divans, who eat of the flocks the lamblings, and calves from the midst of the stall ; who sing to the sound of harping, like David make instruments for song, who drink down wine in cauldrons, with the best of oil them anoint." He castigated them because they trampled the weak, took bribes, destroyed the poor and dealt dishonestly in their business transactions. Nothing seemed left of the simple nomads who came in with Joshua and fought fiercely for possession of the land flowing with milk and honey. Prosperity and high living had worked a sad change.

Apart from purely military fortifications and such obvious safeguards, the only really constructive piece of work for public good undertaken during the monarchy seems to have been the cutting of the great Siloam tunnel in Jerusalem by Hezekiah. The engineering skill displayed was small. Starting at each end, apparently without expert guidance, the two parties of workmen proceeded along until by a miracle they met near enough to hear each other's picks. Their joyful embraces when they finally met can be understood, and the whole event was duly recorded by an inscription cut in the rock wall.

A fleet of ships was constructed by Solomon, which sailed from his port of Ezion-Geber on the Gulf of Aqabah, taking copper and other products to Arabia, Egypt and India, and bringing back riches for his palace and his court, the round trip taking three years, but the venture did not last long and the fleet suffered ignominious shipwreck in the harbour of Ezion-Geber during the reign of Jehoshaphat.

In the minor arts no special influence seems apparent. Egyptian, Philistine and Ægean imports were copied with the usual crudeness, copies being made from copies until little of the original form was left. The fine patterns of the Canaanite period disappeared altogether, and plain painted lines and coarse mouldings took their place. Jewellery was either imported direct or founded on contemporary Egyptian models. Stamped jar handles of this period are found with many familiar Hebrew names, Hoshea, Laham, Azariah and Haggai, also royal stamps. The towns mentioned on them are Hebron, Ziph, Socoh, and Maresheth. From references in 1 Chron. iv, 23 and 2 Chron. xi, 5–11 it is suggested that these town names refer to a royal monopoly of potteries. The personal names may refer to the potters who made the jars.

Burial customs remained much as before, but the caves were usually smaller, benches and divans round the walls being provided for the deposition of bodies. The side entrance of earlier times had given place to a roof entrance. Bodies were laid on the left side, knees drawn up to chin. If laid on the ground piles of stones covered with earth were laid over them. When a tomb became full, and more room was required, the older bones were accumulated and laid in cavities in the floor. Sometimes mazzebahs or baetyls were set up to keep the door block in position, probably representing the god, who kept robbers away and guarded the deceased from harm. These rock-cut tombs with their benches and pottery and utensils were rather like the oriental house. Perhaps this was done deliberately so that the spirit might feel more at home. Jar burials of infants continued as foundation deposits, and the sacrifice of infants at High Places only died out slowly.

So far nothing has been said of the origins of writing in Palestine. Inscriptions and papyrus manuscripts there must have been in plenty. Neither Egyptian nor Hebrew monarchs were ever backward in drawing attention to their achievements, but except for a few Egyptian stelae, one or two inscribed statues, and a number of scarabs with royal or official names on them, practically nothing Egyptian has survived. Of Hebrew records nothing has been found except the Siloam tunnel inscription of Hezekiah, a few ostraca and seal rings, stamped jar handles, the calendar inscription from Gezer, the famous Moabite stone, and the equally famous Lachish Letters, inscribed on pottery fragments in the time of Jeremiah (597–588 B.C.) by Hoshaiah, captain of an outpost near Lachish, and addressed to his commanding officer in that city, who had evidently made accusations which were indignantly repudiated by Hoshaiah. The only explanation which seems to account for this extraordinary lack is that during the fanatically nationalist outburst of the Maccabean period everything which was of foreign or pagan origin was ruthlessly destroyed. Mob enthusiasm is never discriminating and all the Hebrew records must have shared the same fate. What survived was later made short work of by Christians, who were probably unable to read and took no chances. Of the writing if any, used by the early Canaanites, nothing is known. But the discovery of the Duweir Ewer at Lachish, and ancient inscriptions at Sinai, have shown us that at least as far back as 1200 B.C. people were using an Old Hebrew script with affinities to early Phoenician forms. Among the Hebrews the art of writing must have been amazingly general judging by the experience of Gideon who picked up a casual, passing lad from Succoth and obtained from him a written list of the names of the chief men of that town (Judges viii, 14). At no other period of Palestinian history were the mass of people able to read and write as they seem to have been then, certainly not at the present day. In the Late Bronze Age Babylonian cuneiform was used for all official documents, the famous Amarna correspondence between Akhenaton and his Syrian governors being in that form. Egyptian hieroglyphs were used even earlier by Egyptian monarchs to record their boundaries and conquests, but neither of these writings would have been understood by the general public, being purely official and not intended for the masses. Later, Greek and Roman characters were also introduced, and the Old Hebrew angular script changed to square-shaped symbols out of which modern Hebrew writing has developed.

It was perhaps during Ahab's reign that the turning point in the Hebrew religion arrived. Hitherto it had not differed in essence from the religion of fellow Semites in neighbouring lands who also worshipped Yahweh. But from now the Hebrew idea of Yahweh changed. He was no longer associated with the Mother Goddess—though among the Jews of Egypt he had a consort as late as the fifth century B.C. With the advent of a line of fierce denunciatory prophets like Amos, Micah and Jeremiah, a new conception arose. The typical oriental deity, quick to anger, susceptible to flattery and rejoicing in the odour of sacrifice, was bitterly spurned by these prophets who insisted that God required good behaviour rather than sacrifices. Even so, it was at first beyond Israelite power to imagine a God capable of more than narrow national interests; but gradually a higher perception was born and eventually Judaism preached a universal God concerned with all his creatures and demanding their love and loyalty to his laws.

But this great change was not made without accompanying and salutary experiences of a painful character. For a while "cakes and ale" were to continue, though in a diminishing degree with each succeeding monarch. Outside Palestine the Assyrian people were growing in power, and eventually swooped down upon the Northern Kingdom and carried off its inhabitants into captivity and slavery, putting in their place mixed multitudes from other sources. The Southern Kingdom survived another 150 years, then fell in turn before the might of Babylon. Less brutal than the Assyrians, the Babylonian rulers allowed the people to live in moderate peace, permitting them the exercise of their own religion, and thus enabling inspired teachers like Ezekiel to keep alive the national spirit and maintain contact with the exiled group.

During the long absence of the captives there is little to tell of the cultural progress of Palestine. Vassal first to Assyria and then to Babylon, it was inevitable that Assyrian speech, script and legal formalities should become customary in all government and business transactions, and were used by the garrisons maintained in the chief cities by the Assyrian kings. Two official tablets in Assyrian have been found at Gezer. But Assyrian culture itself made very little mark on the country.

About 516 B.C. came the first trickle of returning exiles. Zerubbabel and his fellow leaders undertook a restoration of the temple, and the walls of Jerusalem, and about sixty years later Nehemiah brought back a further group. In 445 B.C.

Nehemiah continued the restoration of Jerusalem, and his great wall has been found by excavators. Other devastated cities underwent their usual reconstruction, the Book of the Law was proclaimed, and the elaborate Temple ritual reorganized. Little by little the State of Jerusalem was established. Such works of reconstruction left little time for cultural rebirth; the country was still recovering from its rough handling, and it was not until about 300 B.C., when Alexander's conquests united the ancient world and spread Hellenistic culture, that anything new appeared in Palestine. But thereafter Greek art and Greek culture was to dominate the entire civilized world.

With the rise of the Ptolemaic Dynasty Egypt began again to cast eyes on Palestine, and to tussle with Syria for its possession. The city strata of this period show a recrudescence of Egyptian motifs, though in a Hellenized form; and a growing national feeling in Judah was resulting in a determined effort to create for the first time a characteristic Hebrew culture. When in 175 B.C. Antiochus Epiphanes set himself to root out the Jewish religion and establish Greek ideas, this new nationalism flared up into the bitter Maccabaean revolt, during which Judaea was established as an independent state, and a spirit of fanatical hatred of foreign ideas and culture inspired the Hebrew peoples to destroy everything which was not Jewish. It was during this period that most of the ancient inscriptions and manuscripts must have perished. As is usual in such movements, strenuous efforts were made to revive early styles of pottery, and lumpy, badly-baked, clumsy imitations of the old Canaanite forms appear once more.

But the impact of Greek influence was too great, and when in 63 B.C. Pompey captured Jerusalem, the pathetic and only attempt to establish a genuine Hebrew culture came to an end. The city fortifications were again rebuilt after the old traditions but inside the walls classical architecture was copied freely, though its principles were never clearly understood by the native architects. Thus in the so-called Tomb of Absalom in Jerusalem Ionic pillars blandly support a Doric frieze above which is set an Egyptian cornice! The temples of the old Canaanite Gods, and of Ashtoreth at Beth-Shan, became transformed into Greek temples of Naukratic design dedicated to

Dionysus and Astarte-Atargates. Everywhere the ancient Canaanite, and even the Egyptian deities, were impartially worshipped by a cosmopolitan population who had no objection to their new Greek form. In secular life the same great change was found. Greek houses, Greek baths and Greek theatres were the accepted adjuncts of city life. Streets were colonnaded and paved, houses were decorated inside with beautiful painted friezes or scenes of various kinds. Though the humbler mass of people remained, as ever, untouched by the passing of times and customs, the upper classes enjoyed a life which had appreciably widened in culture and education. Commerce again flourished, and it is in this period that an enormous trade in Rhodian wine developed. This came into Palestine from Rhodes in huge two handled jars, one handle bearing the name of the eponymous magistrate after whom the year was called, and the month of bottling, and the other handle being stamped with the name of the merchant. Stamped handles from these wine-amphorae are found in hundreds all over Palestine in the Hellenistic strata. The exquisite red and black figure vases were also imported, and large numbers of fragments remain.

For the first time tombs began to show some artistic taste. Caves, of course, continued to be freely used as always, but low chambers, entered by a shaft from the roof, were also cut in the rock. Trough-shaped graves were set in a row at right angles to the walls and covered with stone slabs, under which, or on which, were laid the usual burial deposits consisting of cheap jewellery imitations, small figures of deities, lamps, food vessels and so on. This developed into the " kokim " type of grave in which one to three horizontal shafts were driven into the walls of the chambers at right angles, just big enough to hold a body. The famous Tomb of Apollophanes at Marissa is of this type. Somewhat like a cruciform church in shape, the interior is decorated with beautiful friezes of painted animals, each accompanied by its name in Greek. There were also paintings of horsemen and men leading elephants, but as the representation of humans offended religious precept the Moslem fellahin destroyed them. A second and perhaps later type of tomb, belonging mainly to Christian times, consisted of a chamber with benches parallel to the walls, called " arcosolia." Sometimes the two varieties are found together as in the " Tomb of the Judges " north of Jerusalem. Masonry tombs also appear in north Palestine, examples being known at Kedes and Tell Hum. The sarcophagi in them have Pent covers, are often elaborately ornamented, and sometimes elevated on platforms. Stone pillows are provided inside for the head to rest on. At Um Keis they flank the road leading out of the city in Roman fashion.

With the dawn of the Roman period and the accession of Herod to the throne in 37 B.C. a new and energetic period of building began. He seems to have set himself out to imitate the glories of Solomon and built himself a palace and a temple at Jerusalem as well as an amphitheatre. At Samaria, he elevated a great temple far above the city by transforming the summit of the hill into a platform. A basilica, and a colonnaded street and the great west gateway were also his. At Jerusalem, he placed great towers near the modern Jaffa gate, and erected strong walls round the temple.

In the chief cities Roman governors followed suit and provided themselves with the most up-to-date amenities of civilization. The Hellenized temples were rededicated to Roman deities, and amphitheatres, hippodromes, arcades, public baths and spacious houses made life pleasant. At Beth-Shan, the governor Gabrinius built an amphitheatre which is to-day the best preserved piece of Roman architecture in Western Palestine, with eleven double vomitories and seats in twelve tiers. On high days and holidays, beasts and gladiators must have fought each other for public entertainment there, and the Christian martyrs who died at Beth-Shan in the third and fourth centuries A.D. probably met their end in the same arena. Of Gerasa, one of the great cities of the Decapolis, on the other side of the Jordan, sufficient remains to enable us to reconstruct a typical Roman-Palestinian metropolis, rich and luxurious with the wealth of caravans passing up and down the main trade routes between Syria and Arabia, Egypt and the Euphrates.

Roman customs, Roman law and Roman fashions of jewellery, pottery, architecture and general culture now entirely replaced the older ways, but with the spread of the *Pax Ro-*

mana perhaps the most significant change in the history of the country took place. Freed from the ever-present menace of invading armies, and the consequent vital necessity of living upon impregnable hill-tops huddled behind huge protecting walls, the people of Palestine began to consider the far greater comfort and convenience of moving down to the open plains. One by one the great Canaanite fortresses began to be abandoned and new settlements founded on lower ground. Some, such as the cities of the Decapolis, grew to greater importance than before for a few centuries longer, while Jerusalem and one or two others have even survived to the present day, but the majority were gradually abandoned, and their names given to the new and flourishing cities. Thereafter shepherds and nomads erected their tents in the courtyards of the deserted palaces and in the once-busy streets and market places.

Little by little time, and the weather, and local depredations brought everything to ruin; and soil and vegetation covered the remains, until nowadays we do not even know where some of those mighty fortresses " reaching unto heaven " once stood.

As for the Hebrew peoples, they too suffered change, for after the destruction of the Temple by Titus, the great dispersal to the four corners of the earth began. Now only the Hebrew religion has remained untouched by the hand of time. Once again as we look back we must marvel at a people, small and divided, who could not copy a pot properly, or cut a straight tunnel through the rock of their capital ; who slavishly adopted the ideas and customs of their neighbours, and yet who remained spiritually untouched by the polytheism of their conquerors. In that one realm of religion and spiritual perception they out-distanced the entire ancient world, passing in the course of a few centuries through polytheism and henotheism to the sublime and uncompromising monotheism of the later prophets and psalmists. When one considers that there was no precedent for this—unless one remembers the beautiful pantheism of Akhenaton, idealist pharaoh of the XVIIIth dynasty—the event is even more inexplicable, and may perhaps be considered as one of the great contributions to human progress.

THE DATING OF EARLY HEBREW INSCRIPTIONS (THE GEZER TABLET AND THE SAMARIA OSTRACA).

By David Diringer

My friend Dr. S. Birnbaum has made a new and ingenious attempt at dating the Gezer Tablet and the Samaria Ostraca (*The Dates of the Gezer Tablet and of the Samaria Ostraca*, in *P.E.Q.*, July–October, 1942, pp. 104–8), by means of a detailed comparison of the letters of *G*. (Gezer Tablet) and those of the Byblus inscriptions of Aḥiram, Abiba‘al and Eliba‘al, the Samaria Ivories, the Arslan Tash Ivories and the Mesha‘ Stele; and a comparison of some letters of *S*. (the Samaria Ostraca) with those of the Mesha‘ Stele and the Siloam inscription.

Dr. Birnbaum arrives at the following conclusions:

As for the *Gezer Tablet:* " . . . the early part of the eleventh century seems to be out of the question . . .Aleph, Mem, Sadhe and Qoph would suggest that G cannot be older than the middle of the tenth century; Daleth, Zayin, Yodh and Mem, that it is not older than the first half of the ninth century; Waw, Kaph, Lamedh and Pe would seem to bring it down to the middle of this century. Looking now for characteristics pointing to a *terminus ante quem*, we come upon features of Aleph, Daleth, Heth and Mem which we no longer meet with after the middle of the ninth century. Thus our two lines of delimitation meet at this same date."

As for the *Samaria Ostraca:* " This comparison would seem to leave us no doubt that S is nearer to Si(loam) than to M(esha‘) and that the Ostraca belong to one of the later possible periods. The similarity is, in fact, so great that they can safely be ascribed to the latest period, that of Jeroboam II, i.e. to the years 774, 773, 768 and 766."

These conclusions are, indeed, possible, although not probable. But I do not agree with Dr. Birnbaum's method. This could be accepted safely, (although we cannot exclude the possibility that the form of some characters of later inscriptions may be much older than the inscriptions themselves), when (1) the utilised documents are many and are datable with certainty ; (2) they belong to the same class of inscriptions ; (3) they come from the same territory or from its neighbourhood. Otherwise the conclusions arrived at will never be accepted as certain. Such is the case with Dr. Birnbaum's comparisons.

(1) Not all the dates of the utilized documents are certain. For example, (a) according to my opinion (and to that of many scholars) the Aḥiram inscriptions belong to the thirteenth century ; at any rate, the date " early eleventh century " cannot be regarded as certain, and used as a basis for the dating of other documents. (b) The date of the Siloam inscription seems to be certain, but it is not more certain than that of the Samaria ostraca, and it cannot be used as the *only* base for the dating of other inscriptions : in the same way it would be dangerous to utilize the Samaria ostraca for the dating of the Siloam inscription.

(2) It is not advisable to utilize the royal inscriptions of Aḥiram, Abiba'al, Eliba'al and Mesha', or inscriptions on ivories, for the dating of a peasant-tablet ; and it is not advisable to utilize stone inscriptions for the dating of handwriting (i.e. of the ostraca of Samaria).

(3) The same may be said regarding comparisons of inscriptions from Byblos, Arslan Tash and Moab, with inscriptions from Gezer and Samaria.

The comparisons I speak of are obviously not those on broad lines, which are natural, but those in the details (slight curving, slight slanting, etc).

Now, what is the situation of early Hebrew epigraphy ? I have already pointed out (*Le Iscrizioni antico-ebraiche palestinesi*, 1934, pp. 12, 93, and *passim*) that the epigraphical elements are, at present, not sufficient for a *sure* dating of early Hebrew inscriptions, and that it is extremely dangerous to compare inscriptions of different classes and of different territories. M. Dussaud asks (review of my book, *Syria*, 1935, p. 210) why the situation of early Hebrewepigraphy should be different from that of Greek or Arabian epigraphy. The reason of it is, in my opinion, simple : Greek epigraphy, for example, has at its disposal tens of thousands of inscriptions, of which many hundreds are datable with certainty ; while there are only some hundred early Hebrew inscriptions, of which only a very few are datable (moreover, there is no general agreement among scholars concerning their dates).

It is true that the present situation of early Hebrew epigraphy is much better than it was in 1934, but it is still far—very far indeed—from possible to compare it with that of the main branches of epigraphy. Thus, in my opinion, it is still premature to attempt comparisons like those made by Dr. Birnbaum, and, especially, to consider such conclusions as a solution of the chronological problems. This as a general remark.

With regard to details, we may note :

(1) Dr. Birnbaum is certainly right in pointing out that the difference between the Gezer Tablet and the Aḥiram inscriptions is very marked. In fact, all scholars agree that the former is much later than the latter.

(2) It is, however, not permissible to consider the forms, with all their details, of the Aḥiram characters as the original forms of the north-Semitic letters. Some details might have been a technical peculiarity of the engraver : note, for example, the exaggerated curving in some letters (the two oblique strokes of the *aleph*, the main stem of the *resh*, the *nun*, the *waw*, etc. and particularly the bottom of the *pe*) which are not necessarily a proof of the antiquity of these letters : in many cases it is known that the curves are a peculiarity of the later forms.

(3) On the contrary, the author of *G* had obviously great difficulty in making curves. Thus, not only the main stems of the *resh*, the *waw*, the *pe*, the *lamed*, etc. are more or less vertical, but even the form of the ‘*ayin*, which should be round or oval, is rather angular, and so also are the tops of the *pe*, the *qoph*, etc. However, if we examine carefully the *waw* of the fifth line, for example, we see that—roughly speaking—its " top part consists of a semi-circle " exactly as Dr. Birnbaum says about the Aḥiram *waw*.

(4) The right side of the *G dalet* is practically vertical (as

are the main stems of the *resh*, the *samek*, etc.) The *mem* of *G* is very interesting : it seems that in both cases (lines four and six) the lowest stroke was at first of the same length as the others ; why and when it has been lengthened it is obviously impossible to know. At any rate, the antiquity even of its present form is beyond doubt : it is still a zig-zag line, while in the later form it clearly consists of two parts : the main stem and the head. The form of the *G kaph* is certainly later than that of the Byblos inscriptions, but it has nothing to do with the form of the *kaph* of the Mesha‘ inscription.

(5) One of the most peculiar features of *G* is that practically no letter appears twice in exactly the same form : note particularly the eight *ḥets*, the nine *yods*, the five *waws*, the four *qophs*, the two *zayins*, etc. (This fact is in my opinion, a proof that the forms of the letters were still unstable in details). Thus, it is quite easy to find forms which may be compared with those of letters of other inscriptions, earlier ones or later ones ; but the result of the comparisons will not be decisive.

(6) Under such conditions, I do not believe we can accept the result of Dr. Birnbaum's attempt. All things considered, I still hold the opinion (see *Iscrizioni*, p. 12 ; *L'Alfabeto nella Storia della Civiltà*, 1937, p. 273) that the Gezer " calendar " should be assigned to the tenth century or better to the eleventh century. See also Albright in *Archiv für Orientforschung*, V, 1929, p. 151, etc., and the reviews of my book *Iscrizioni* by P. R.-M. Savignac, O. P. (*R. B.*, 1935, p. 291 ff), P. L. Semkowski, S. J. (*Biblica*, 1935, p. 356 ff.), Dr. J. G. Février (*Rev.d. Etud. Juiv.*, C bis, 1936, p. 104 f.), Dr. H. L. Ginsberg (*Arch. Orient.*, 1936, p. 145 ff : " The linguistic and graphical picture presented by this document precludes a dating later than the tenth century, and even suggests the eleventh. . . .") etc.

(7) Concerning the dating of the Samaria Ostraca, Dr. Birnbaum himself is well aware that " . . . if possible, it is of course, preferable to avoid comparison between inscription style and handwriting." But, notwithstanding, he makes the attempt and arrives at the conclusions mentioned above. I will not discuss this problem in its details : I will only add to what I have already said about Dr. Birnbaum's comparisons, that

in the case of *S* he bases his conclusions on two documents only, the Mesha‘ Stele for the negative results and the Siloam inscription for the positive ones. Thus, even if he were right in his conclusions, it would not prove that his method is right.

(8) But Dr. Birnbaum's conclusions are probably wrong, and I hardly believe that they will be accepted by epigraphists. It may be that my orthodox dating of the Samaria Ostraca (to the reign of Aḥab) is also wrong, and that the date at the end of the ninth century (Dussaud, Albright, and others), is more probable, but to date it in Jeroboam's reign seems to me absolutely unacceptable.

Concluding my note, I must point out that while Dr. Birnbaum's attempt will certainly be appreciated by all epigraphists, the extant material of early Hebrew epigraphy is not yet sufficient, as said above, to allow us to get positive results, from the chronological point of view, from too detailed comparisons. But this situation does not mean that Dr. Birnbaum's interesting attempt cannot be successfully utilized for other epigraphical purposes. At any rate his work cannot be said to have been wasted.

NOTE ON SOME JAR-STAMPS AND SEALS DISCOVERED AT LACHISH

By David Diringer.

I have read with great interest J. A. Thompson's remarks (*BASOR*, No. 86, April, 1942, pp. 24–27) on my reading of jar-stamps and seals discovered at Tell ed-Duweir (*PEQ*, LXXIII, 1941, pp. 38–56 and 89–109). Some suggestions of his are acceptable, others are not.

(1) Private Stamp No. 4. As I have already pointed out (*art. cit.* pp. 41–42) " the reading is certain " and the second line of the inscription " can only be read *m-g-n*". According to Thompson what I take " to be a tall upright stroke is obviously accidental. The photograph shows a clear trace of the left-to-right diagonal of the *taw*." Thus, he reads *m-t-n*. Thompson has probably overlooked the fact that I have been able to examine *seven* original impressions of this stamp. All things considered, there is no doubt that my reading, *m-g-n*, is the only one possible.

(2). Private Stamp No. 5. I still prefer the reading *'ḥsmk*, but I do not exclude *'ḥ'mr*.

(3). Private Stamp No. 10. Prof. E. L. Sukenik (*PEQ*, LXXIV, 1942, p. 57) and Prof. W. F. Albright (quoted by Thompson, *art. cit.*, p. 25) are right : I fully accept the reading *le-Naḥûm Hiṣṣîlyāhu*.

(4). Private Stamp No. 12. According to my opinion, the most probable reading is *sh-b-n-y-h-w '-z-r-y-h-w*.

(5). Private Stamp No. 19. As I have already pointed out (p. 53), the reading of the letters *sh-l-m* is fairly certain and that of the letter *y* possible. Thus, the reading *Y*-(*r*)-*sh-l-m* is not " out of the question."

(6). Seal No. 1. The reading *m-'-p-s* is certainly much better than *m-'-s*, and Prof. Driver's interpretation of *m-'-p-s* is obviously more acceptable than that of Thompson's of *m-'-s*.

(7). Seal No. 2. The references given by me (*art. cit.*, p.102) are wrong. They should be corrected in this way: S. H. Hooke, *PEF QS*, LXVII, 1935, p. 197; and LXVIII, 1936, p. 38; N. Walker, ibid., 1938, p. 259, etc.

As to the reading, nobody doubts that the reading of the letters *smk* be right. But what about the first letter of the second line? It would be absolutely unusual to find the patronymic before the name of the owner. On the other hand, one cannot exclude the fact that the missing part of the seal could contain the letter *aleph*. On the whole, I still consider the interpretation *s-m-k-(')-l '-ḥ-m-l-k*, the most probable.

ON AN IRON AXE FROM UGARIT

By Theodor H. Gaster.

In *Ugaritica I* (Paris, Geuthner, 1939), pp. 107–125, Claude Schaeffer discusses an iron axe, of the fifteen-fourteenth century B.C., discovered at Ras Shamra-Ugarit. The handle, executed in copper and gold, is flanked with the heads of lions. and surmounted by the figure of a crouching boar. From the fact that the boar is not common in Semitic or Aegean art, and in view also of other considerations, Schaeffer concludes that the object is of Mitannian or Anatolian provenance. I should like to draw attention to two further points which support this view.

The first is philological. In the Ras Shamra texts themselve the word *bržl*, " iron " (Virolleaud, GLECS III, 72) is actually recognized as a foreign, and probably Mitannian, loanword, by being written with the sign *ž*, representing a Hurrian affricate sound for which there was no Semitic equivalent. We may compare the Georgian (Svanetian) *beredj* " iron." Latin *ferrum*, for which there is no satisfactory native etymology, has been claimed to be the same word (Bork, *Beitr. z. Kleinas. Sprache*, 1907, I, 21). In this connection, it is interesting also that Jeremiah xv, 12 speaks expressly of " iron from the north " (בַרְזֶל מִצָּפוֹן).

The second point is that boars and lions are, in fact, the respective sacred animals of the Asianic Mother Goddess (Kybele, Mén, Ma, Rhèa, etc.) and her consort (Attis). For lions in the cult of Kybele, cp. Lucretius ii, 60 ; the portraits of Mên on coins from Gordos and Prostanna ; the portraits of the Cretan Dea Mater (Karo, ARW 1904, 105) and, in general, Garstang, *The Syrian Goddess*, pp. 22, 70 etc. For the boar as symbol of the fertility-god, note how the votaries of Ba'al, assimilating themselves mystically to his own personality, are styled *ḥnzrm*, " boars," in the Ras Shamra text, *Death of Ba'al*, V.9. and how Baal-Hadad himself bears the name *Ḫumunṣir* in CT XX 23, 19 (see Gaster, OLZ 1936, 401 ; IRAQ 1939, 113). Note also the presence of the boar in the myths of Attis and Adonis.

The axe, then, embellished with these emblems, was obviously a sacerdotal appurtenance in this Asianic cult. We know from plentiful examples on " Syro-Hittite " monuments that priests indeed carried axes (see *A.B. Cook*, *Zeus*, II, pp. 631 ff.), and this will in turn explain why certain axes found at Ras Shamra actually bear the legends *Ḫṣrn rb khnm*, " Ḫaruṣenni, chief of the priests," and *rb khnm* " chief of the priests." They were *not* votive gifts to him, as stated by Schaeffer, but symbols borne by him (cp. the later Roman *dolabra pontificalis*, Paul. ex Fest. p. 319, 8 Mueller).

At Ras Shamra, as Schaeffer observes, the symbolic boar appears elsewhere only on a lance. This, too, is a religious emblem, for the priests of the Attis-Kybele cult were actually called *aichmoforoi*, " lance-bearers," *doruforoi*, " spear-bearers or, in the later Roman cultus, *hastiferi* (see H. Hepding, *Attis*, pp. 169–170).

September 26th, 1942.

CORRESPONDENCE

THE FOUR NORTH WALLS OF JERUSALEM

Sir,

Most of the article by Mr. Ross in your last number was written before he knew about the excavations which were made by the Department of Antiquities in 1937–8, against the present north wall of Jerusalem, and the case for identifying the remains farther north with the famous Third Wall of Agrippa is really much stronger than his readers may realize. The discoveries which Mr. Hamilton has made round about the Damascus gate seem to be decisive. Mr. Hamilton's examination of the contents of the foundation trenches at this point has proved that what appeared to be the oldest parts of the present wall cannot be earlier than the foundation of Aelia by Hadrian and belong probably to the end of the third or the beginning of the fourth century A.D. It is hard to think that anyone will now hesitate to identify with Agrippa's wall the remains described long ago by Robinson at a time when they were still conspicuous.

The new fragments of this wall which are mentioned by Mr. Ross (see the footnote on page 79) have been described briefly in the *Quarterly of the Department of Antiquities in Palestine*, Vol. X, No. 4, page 195. " The Third Wall " is the heading of an editorial note which summarizes these last discoveries made by the Hebrew University and the American School of Oriental Research. The most interesting finds were the foundations of two rectangular towers. " Partly under the road (behind the American School) and partly under the tennis-court of the School, a stretch of wall 23m. long and 4m. thick, and a tower about 12m. wide and projecting 9m., were laid bare." One of the stones in the foundation layer measured 3.30m. long by 1.50m. wide. The line of the wall for the next 140 metres to the east is covered by modern buildings but a second clearance beyond these " revealed another tower, approximately 20m. wide and projecting 8m., the largest so far discovered on the line of the Third Wall, of which 765 metres have now been traced. As this tower stands near the slope of the Kidron Valley, one may well suppose that the wall turns in this vicinity to join what Josephus called the ' old ' wall of Jerusalem." It may be germane to add for what it is worth the fact that all the towers discovered by the late expedition to Samaria in the Herodian city wall were similarly rectangular in plan, unlike the three towers cleared by the previous expedition near the west gate of the Roman city.

About the line of the Second Wall, on the other hand, we are still without conclusive evidence. The sketch given by Mr. Ross (Plate XI) is not helpful and readers will do well to consult the excellent contoured plan of Jerusalem published by Mr. Richmond in a small pamphlet on *The sites of the Crucifixion and the Resurrection*. (This pamphlet was published in 1934 by the Catholic Truth Society, 38–40 Eccleston Square and 28 Ashley Place, London, S.W.1 : a copy of it will be found in the library of the Fund.) The contours on this plan show that the authenticity of the traditional sites of the Holy Sepulchre and Calvary, an authenticity which *pace* Mr. Ross has not become " an article of faith ", cannot be negatived on our present knowledge. We hope Mr. Hamilton or Mr. Johns, whose work in the Citadel area is familiar to our readers, may be able to undertake the explorations necessary to throw light on this wall also.

November, 1942. J. W. CROWFOOT.

The Committee have to acknowledge with thanks the following :

The American Journal of Archaeology, April–June, 1942.
The American Journal of Philology, July, 1942.
The Annual Report of the Smithsonian Institute, 1940.
The Antiquaries Journal, April, 1942.
Bible Lands, July–October, 1942.
The Biblical Archaeologist, September, 1942.
Bulletin of the American Schools of Oriental Research, February–April, 1942.
Expository Times, June–October, 1942.
The Harvard Theological Review, April–June, 1942.
The Jewish Quarterly Review, April–July, 1942.
The Journal of the Near Eastern Studies, April–July, 1942.
The Journal of the Royal Society of Antiquaries of Ireland, June, 1942.
Religions, July, 1942.
The Quarterly of the Department of Antiquities in Palestine, Vol X, No. 4.
The Scottish Geographical Magazine, September, 1942.
Jesus in the Light of History, by A T. Olmstead, 1942.

E. W. G. MASTERMAN, M.D., F.R.C.S.
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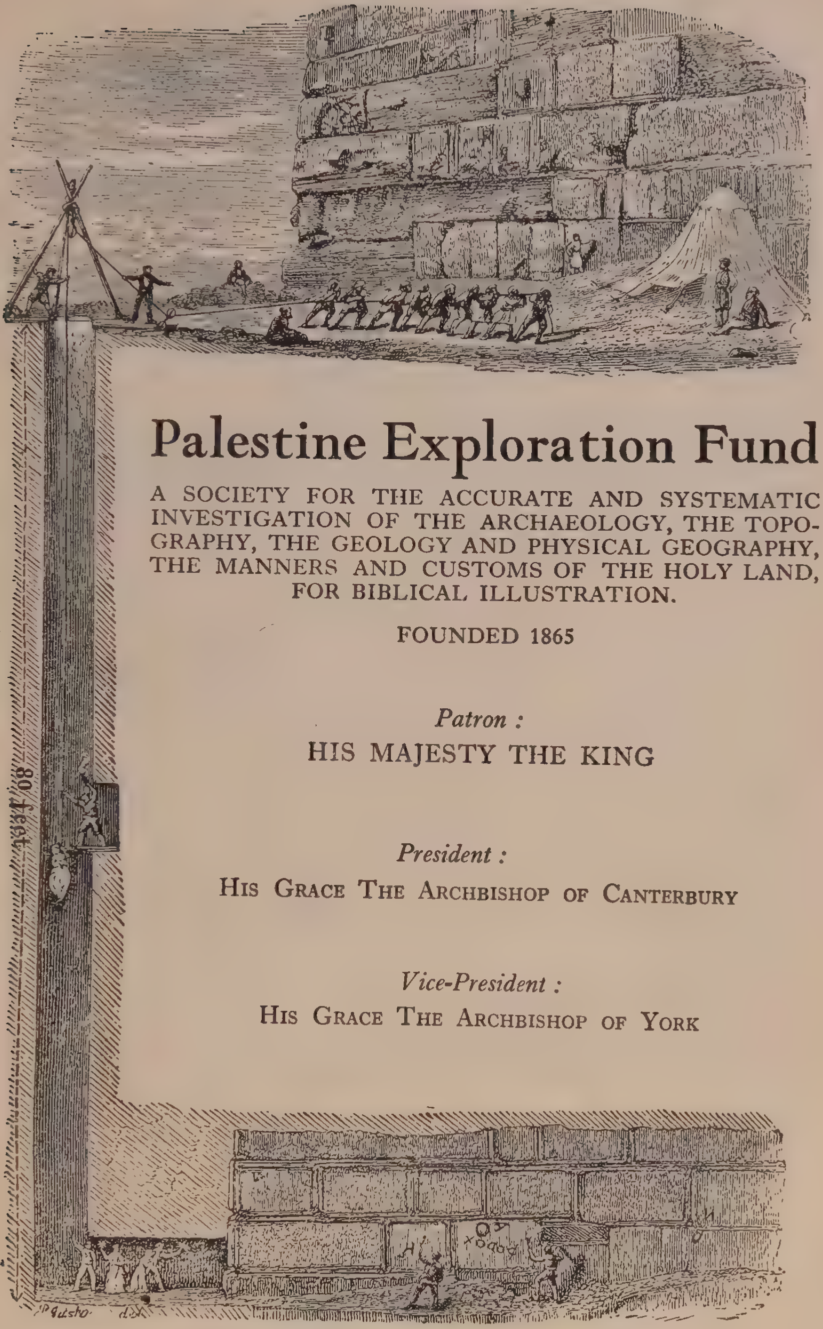

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THE
PALESTINE EXPLORATION FUND

NOTES AND NEWS

By the time this issue of The Palestine Exploration Quarterly appears we shall have entered upon the fifth year of the war. Light begins to be seen on the horizon at last. There are few who have not shared in some degree in the baptism of suffering through which all nations are passing. May the suffering prove to be the " birth-pangs " of the new age, that kingdom which many prophets and wise men have desired to see but have not seen it. In spite of many difficulties, diminished subscriptions, shortage of paper, and other causes of frustration, the Committee still find themselves able to bring out a somewhat reduced Quarterly, and have to offer their sincere thanks to those faithful friends who have not failed in their valued support during these years of trial.

The passing of time has taken its inevitable toll of the older generation of those who have carried the burdens and shared in the work which the enterprises undertaken by the Palestine Exploration Fund have involved. Three notices in this issue mark the departure of three friends who have each contributed in no grudging fashion to the cause of Biblical archaeology and kindred studies. They have truly served their generation by the will of God, and they will not be forgotten.

The Conference on the Future of Archaeology which took place on 6th to 8th August, at the London University Institute of Archaeology was extremely well attended. Twelve sessions were held and there can be few problems connected with archaeology in the post-war world which were not ventilated. At each session addresses were delivered by specialists in the various fields and a notable feature of the proceedings was the vigour of the discussions provoked by these addresses. The meetings most closely concerned with the two institutions connected with this journal were those entitled, " The Future of Discovery : Archaeology Overseas, The Planning and Independence of Societies, and Archaeology and the State Overseas." At the first of these Palestine figured in three of the four addresses : Sir John Myres, whose subject was " Greek and Roman Archaeology," mentioned a number of the excavations in Palestine and Transjordan, and the work still to be done ; Dr. Schaeffer, who spoke about Syrian, Palestinian and Turkish Archaeology, pressed for more large-scale expeditions and deprecated the continuance of mere *sondages* ; Professor Gibb described recent progress in Islamic Archaeology and urged intenser study of survivals in the present-day culture of these lands. In the second, Dr. Alan Gardiner gave an account of the splendid work of the Egypt Exploration Society and of the difficulties, mainly financial, with which it has had to contend. In the third, to meet such difficulties Sir Leonard Woolley pleaded persuasively for the establishment of closer relations between the British Council on the one hand and the schools and societies working overseas on the other, and the discussion which ensued was one of the liveliest in the whole conference. But though these three sessions concerned us most directly, there were others which bore almost as intimately on different branches of our work, the sessions, for example, which dealt with the training of archaeologists and the records of discovery : at the latter Sir Cyril Fox advocated the formation of comprehensive card catalogues covering every known antiquity with references to all the relevant literature, a method of record which will doubtless be considered by the compilers of the new Survey of Palestine. The brilliant success of the conference was in large measure due to the untiring enthusiasm of Miss Kathleen Kenyon, Acting Director of the Institute ; we tender her the warmest congratulations.

In the January issue of the *Harvard Theological Review* there are several articles of interest to Bible students. Professor Finkelstein contributes a valuable article on " Pre-Maccabean Documents in the Passover Haggadah " ; Professor Campbell Bonner throws fresh light on the technique of exorcism and in the course of his article shows how the gospel accounts of the casting out of demons conform to the general pattern of exorcism ritual in the first century A.D. Professor Torrey discusses afresh the meaning of the title Iscariot, and arrives at the conclusion that the title does not indicate Judas's place of origin but is derived from an Aramaic form *Ishqarya*, meaning " the False One." He demonstrates that the Marcan form *Iskarioth* is erroneous.

A fresh and valuable discussion of the Ras Shamra material is furnished by a Swedish scholar, Ivan Engnell, in his book entitled *Studies in Divine Kingship in the Ancient Near East*, recently published in Uppsala. He offers a new translation of many difficult passages in those enigmatic texts. His study has the object of showing what an important place the concept of the Divine King plays in the ritual of the Ras Shamra texts. His book will have to be reckoned with by all students of this interesting subject and will no doubt be critically examined by English and American scholars who are at work on the Texts.

In the *Jewish Quarterly Review* for April, 1943, Professor Goodenough discusses the important question of a LXX iconography which was pre-Christian in origin, and compares the evidence for this with the Jewish Old Testament art which has been discovered at Dura Europos. On the question of early Christian art in the catacombs he remarks " Christianity would have begun by adapting Old Testament symbols to the new meanings and explanations only if the Old Testament symbols were already at hand. And this is precisely what a glance at the catacomb pictures shows was happening. For, example Jesus is clearly a figure adapted by Christians from representations of Moses. One of the earliest, if not the earliest, representations of Jesus to be evolved was of him as the giver of life through his raising of Lazarus from the dead. But in doing so Jesus is in these early scenes always depicted with a *rod*, and a glance at the scenes shows that the figure is taken from representations of Moses striking the rock with his rod. That is, the figure of Moses was already at hand." Professor Goodenough goes on to prove that Philo, in his description of the scene of the Burning Bush, in the *Vita Mosis*, is using an illustrated copy of the LXX, thus taking us back to a long tradition of symbolism which antedates Christianity in Jewish usage.

In the January issue of the *Journal of Near Eastern Studies*, Professor Poebel concludes his publication of the Assyrian King List from Khorsabad with a valuable discussion and full notes. The list contains important new material for the chronology and history of Assyria, and we hope it may be possible in the near future to publish in this journal a discussion of Professor Poebel's findings by an authority in this field. In the issue for October, 1942, Professor Wright has an interesting paper on "The Terminology of Old Testament Religion and its Significance." The paper shows the tendency which is growing at present to emphasize the existence of a pre-prophetic monotheism which goes back to the time of Moses, and to minimize the degree to which the early religion of Israel was dependent on that of Canaan. Incidentally Professor Wright, in another interesting paper in the *Biblical Archaeologist* for February, 1943, stresses the point that there is no mythology about God in the Old Testament. While it is undoubtedly true that the post-Exilic editors of the material of the Old Testament, who gave it its final form, felt such a mythology to be unworthy of Israel's God, yet the tone of the allusions to Jahweh's conquest of the dragon in various passages of the Old Testament, and the transformation of the myth in later Jewish Apocalyptic literature, would suggest that such a myth was once part of a larger pattern of belief and practice deeply imbedded in early Hebrew religion.

In his review of Professor Mercer's edition of the Tell el-Amarna Tablets in the *P.E.Q.*, 1940, p. 123, Mr. Gadd remarked : " No. 252 is a very obscure letter, and K's uncertainty is plainly shown by the gaps and italics of his translation." In the February issue of the *BASOR* Professor Albright now offers a fresh translation of this difficult letter, saying " I am now able to explain most, if not all, of the difficulties which subsisted after the careful work of Knudtzon.' In the same issue Professor Albright also discusses two more of the Amarna Letters, viz. Nos. 256 and 274, with interesting results. He points out that, " Thanks to new material from Bogazkoy, Nuzu and other contemporary Western-Asiatic sites, and particularly to the decipherment of the Ugaritic texts, we are in a much better position to appreciate just what contemporary Accadian and Canaanite were like. It cannot be stated too emphatically that there is a very close linguistic relationship between the North Canaanite of Ugarit and the South Canaanite of Phoenicia and Palestine."

In the same issue of the *BASOR* Professor Nelson Glueck offers a plausible identification of the site of the Biblical Jabesh-Gilead. After a careful examination of the eastern side of the Jordan valley, in the course of which he observed many ancient sites which had apparently never before been visited by a Western scholar nor put on any maps, Professor Glueck reached the conclusion that the site of the modern Meqbereh, immediately north of the Wadi Yabish, satisfies all the conditions demanded by the Biblical story of the night march of the men of Jabesh-Gilead to remove the bodies of Saul and Jonathan from the wall of Beth-shan where they had been fixed by the Philistines.

In the *Harvard Theological Review* for October, 1942, Professor Kraeling discusses the " Episode of the Roman

Standards at Jerusalem." He puts forward the interesting suggestion that the sense of eschatological crisis reflected in the preaching of John the Baptist may have been aroused by the episode of the standards which he tentatively places in the early years of Pilate's tenure of office, in or shortly after 26 A.D. We know that the Baptist must have appeared upon the scene with his predictions of the approaching end between 27 and 29 A.D. Hence the suggestion provides an unexpected solution for the problem of accounting for the strong sense of crisis which pervaded the Christian movement at its beginning. The paper will be of great interest to all New Testament students.

In the *American Journal of Archaeology* for October-December, 1942, there is a valuable article by Dr. H. Ingholt, describing the Danish excavations at Hama on the Orontes, the ancient Hamath. Some of the discovered objects illustrated in the article present interesting resemblances with finds from Ras Shamra and Tell ed-Duweir. There is, for instance, a model chariot and charioteer of terra-cotta which curiously resembles the model chariot and charioteers in frit found at Ras Shamra, while the decorated frieze on the shoulder of a cinerary urn at once suggests the frieze on the fragment of the shoulder of the famous Tell ed-Duweir ewer. The range of objects discovered covers a period from about 3000 B.C. to Moslem times. In the January–March issue of the same journal, 1943, Professor Garstang has two very important articles, one on the results of his excavations at Mersin, the site of an early Hittite fortress guarding the approaches into the Cilician plain from the West, the other on Hittite military roads in Asia Minor with a provisional map based on a selection of Hittite texts translated and co-ordinated by Dr. Oliver Gurney. Professor Garstang makes the following comment on the publication of the map : " It represents my personal view of the Hittite world about 1300 B.C., and is published now in the hope that, pending completion of the joint work, criticism may disclose its failings." Students in the Hittite field will be grateful to Professor Garstang for its publication.

Owing to paper restrictions, the Fund has a very diminished number of stock copies of the QUARTERLY. This situation can be eased somewhat if subscribers will kindly return any unwanted copies.

Through the kindness of Sir Charles Marston, the Editor of the QUARTERLY has received an important manuscript by Professor Torczyner dealing with the Lachish Letters and discussing the problems and criticisms which have been raised by the publication of his *editio princeps* of the now famous Letters. The manuscript is too long for publication in the QUARTERLY, but the Editor hopes to be able to publish as soon as possible an article embodying the main points presented by Professor Torczyner in his monograph. The material from the excavations at Tell ed-Duweir is still in process of examination and we are indebted to Professor Diringer for his careful and accurate studies of seals, weights, and inscriptions published in the QUARTERLY during the last three years.

SUBSCRIPTIONS : Subscribers who have not yet remitted for the year now drawing to a close are kindly asked to do so, and thus save cost of postal reminder.

OBITUARIES

SIR GEORGE ADAM SMITH

By Professor N. W. Porteous

By the death of Sir George Adam Smith on 3rd March, 1942, the science of Biblical archaeology lost one of its most distinguished representatives and Biblical scholarship an expositor of renown. His was a life of many-sided activity and achievement, for to the rôles which have been singled out above he added those of preacher, social reformer, churchman and university administrator, and the various obituary notices which have appeared have done justice to all the aspects of his career. He was a great and representative Scotsman, who made his mark early and adorned every office which he held.

This is not the place to speak of his evangelical zeal, of his outstanding pulpit gifts, of his unselfish labour for the betterment of social conditions in Glasgow, of the distinguished part he played in the church life of Scotland, of his patriotic services during the last war and of his long term of twenty-six years as Principal of Aberdeen University. But it is right that we should remember these things when we turn to the consideration of his teaching career in Aberdeen and Glasgow and, above all, seek to assess a literary output which, taken by itself, would have sufficed to add lustre to his name. No student who sat spell-bound at his feet and learned to know the Old Testament as a book of living interest and no reader of his books could surely fail to recognize that George Adam Smith was no cloistered scholar, but one who had seen much of the world and was fit to take a prominent part in its affairs. He had the mind of a statesman, and there was not a little of the poet and the prophet about him. Possessed of the strategist's eye for terrain, he had likewise a tremendous sense of the movement of history, and it was this, coupled with an intimate knowledge of Palestine acquired during several prolonged visits, which lent a unique fascination to his geographical and archaeological work.

There is no better introduction to the geography of Palestine than his *Historical Geography of the Holy Land*, originally published in 1894, in due course to prove of use to the High Command of the British Army operating in Palestine in the last war, and now in its twenty-fifth edition with an additional chapter on Edom. The slightly earlier two-volumed book, entitled *Jerusalem: from the Earliest Times to* A.D. 70, published 1907-8, is likely long to remain an indispensable work, in spite of the fact that the science of archaeology never stands still. A further very great service was rendered to Biblical scholars by the publication in 1915 of the *Historical Atlas of the Holy Land*, which was brought up to date and reissued in 1936. George Adam Smith also edited the large "Topographical and Physical Map of Palestine" of J. G. Bartholomew. To these must be added the volume *Syria and the Holy Land* (1918) and the exceedingly thorough and scholarly article "Trade and Commerce" in the *Encyclopaedia Biblica*.

But, long before the publication of the above-mentioned books, the subject of this memoir had made his name as an expositor of unusual freshness and power. The two volumes on the Book of Isaiah (*Expositor's Bible*, 1889) put George Adam Smith alongside A. B. Davidson as one of the two men who more than any other helped the Scottish Church to survive the shock of the new critical theories forced on its notice by Robertson Smith. The study of Isaiah, which subsequently appeared in a revised form in 1927, was followed in 1896, by *The Book of the Twelve Prophets*, likewise in two volumes (revised edition, 1928), *Modern Criticism and the Preaching of the Old Testament* in 1901, a book which threatened to involve its author in a heresy trial, *The Early Poetry of Israel*, 1912, being the Schweich Lectures for 1910, and *Jeremiah*, 1924 (Baird Lectures). Nor must we omit mention of the small commentary on Deuteronomy (1918, *Cambridge Bible*). Though Biblical scholarship and, in particular, the study of the prophets has in certain respects moved away from the positions taken up by George Adam Smith, his books are likely to retain their value for both preacher and scholar, not forgetting the layman in both spheres of interest. Above all, those who have a special concern for Biblical archaeology ought to remain grateful to one who stimulated in many that practical interest which means so much to the working archaeologist and to the societies which support him.

E. W. G. MASTERMAN

By the death of Dr. Masterman, the Palestine Exploration Fund has lost one who, for almost half a century, had found time in a strenuous professional life to further its interests and its undertakings in every possible way.

Ernest William Gurney Masterman was born 2nd January, 1867, at The Hall, Rotherfield, Sussex: the eldest son of a family, several members of which rose to distinction in various fields of activity. He himself was attracted in early life to the vocation of a medical missionary, in preparation for which he studied, first at Edinburgh University and afterwards at St. Bartholomew's Hospital; and he attained the goal which he had set before himself in 1892, when he was appointed assistant medical officer of the Jerusalem hospital, in which is centred the chief medical work of the London Society for the Propagation of Christianity among the Jews. In 1910 he succeeded Dr. P. D'Erf Wheeler as superintendent of the hospital, which post he held until 1914. The outbreak of the first German war in that year, in which Turkey was on the hostile side, made it necessary for him to relinquish his office and leave Palestine. After an interlude at the Military Hospital in Coventry, he became resident Superintendent of St. Giles Hospital, Camberwell; and he held that post till he reached the statutory age of retirement, in 1934, although still active both in mind and in body. Having no desire for a life of idleness, he offered his medical services, and his knowledge of Palestine, to the Church Missionary Society, and the offer was readily accepted. He was commissioned to establish and equip a hospital at Es-Salt in Transjordania, and in two years accomplished the task. The second German war then intervened, though for him not so drastically as the first, Palestine having come under the British Mandate, so that it was the Germans who were now obliged to leave. He was appointed, then at the age of seventy-one, Medical Superintendent of the General Hospital in Jerusalem.

But about a year later disquieting rumours as to his health began to reach his friends in the homeland, and all the later news deepened the anxiety which they caused. In time it became clear that the end could not be long delayed, despite the magnificent vitality which supported him in the struggle. The final call came on 29th March, when he passed to the reward of his great services to his Faith, to humanity, and to the people of the country with which he had identified his life.

Of his professional skill this is not the place to speak, even if the writer had the qualifications to do so. He can only testify to the many appreciations of his mastery as a surgeon, which he has heard from time to time : and he has himself had some experience of his sympathy and competence as a physician.

It is rather upon Dr. Masterman's connection with the Palestine Exploration Fund that a notice in the *Quarterly Statement* should lay stress. From the time of his first arrival in Jerusalem he became a whole-hearted student of " Palestinology " in all its branches. Nothing came amiss—history, geography, and antiquities : anthropology, physical and social : geology, zoology, botany, climatology, and the possibilities of future development under the happier circumstances inaugurated by the revolution which swept the last of the sultans from his throne—memories of countless conversations with him come back as these notes are jotted down, in which such subjects were discussed, always, on his part, with wide erudition and an insatiable interest. His first contribution to the *Quarterly Statement* appeared in 1896, and was followed by a stream of others, touching on many aspects of the Fund's work. And, in spite of his professional preoccupations, he never spared himself in the pursuit of knowledge. His enviable skill as a horseman opened to him the remotest recesses of the country, at a time when vehicular traffic was limited to a few main roads; and he traversed it from end to end and from side to side many a time, learning it "like a map;" nothing could escape his observant eye. A question having arisen as to whether the level of the Dead Sea is changing, he determined to test it. He went down to Jericho with a stonemason, and thence along the rugged western shore of the Dead Sea, till, at ʿAin Feshkhah, he found a precipitous rock rising from the water. The mason was then directed to cut a mark at a convenient height from the surface of the water; and thereafter Dr. Masterman undertook the tiresome ride to the spot, once a month, in order to record the height of the water in reference to the mark. These observations were published in the *Quarterly Statement* from 1902 to 1913; although the local Bedouin, themselves unseen, had noticed these periodical visits, and being suspicious of their uncomprehended purpose, had destroyed the reference mark! In 1918–9 he contributed a series of articles on "Hygiene and Diseases in Palestine in Biblical and Modern Times," which were afterwards republished by the Fund in book form. An earlier work, *Studies in Galilee* (Chicago, 1909) was a collection of contributions to the Chicago *Biblical World*—principally the fruit of a very happy year, spent in temporary charge of the L.J.S. Hospital at Safed. In a preface written for this book by Professor George Adam Smith (as he then was) he says of it: "It furnishes fresh and notable contributions to our knowledge of so famous a region; it is richly stored with facts; it is lucidly written; and cannot fail to prove alike valuable to the expert and interesting to the ordinary reader."

Besides these literary contributions to the Fund's publications, Dr. Masterman helped in many other ways. He was a frequent and ever welcome visitor to the Fund's excavations, inspecting every new discovery with an enthusiasm which was in itself an encouragement to the directors, and penetrating the most inconvenient caves and tunnels with the eagerness of a schoolboy. (Usually such visits were the signal for a congress of sick folk round the camp, hoping to profit from the presence of the famous doctor.) In 1910 he succeeded Dr. Wheeler as Hon. Secretary in Jerusalem of the Fund, but had to relinquish this with all his other local activities on the outbreak of war. However, his transference to London made it possible for him to succeed the late Mr. J. D. Crace as Hon. General Secretary, and he retained this office until he returned to Palestine. Lady Watson had in the meantime become the Hon. Secretary in Jerusalem ; when she died in 1937, he resumed the duties of his former office.

For a time he acted as Secretary of the British Medical Association : and he contributed other articles to various periodicals and encyclopaedias.

With one who for over forty years was associated with him in a fellowship all but fraternal, he leaves a memory, which will never fade, of a strong, sincere, and devout Christian, loyal to his Church and his calling, supremely blessed with gifts physical and intellectual, impatient of all the shams, frauds and " crankeries " which infest the land of Palestine, happy in his work, happy in his many interests, happy as the head of a talented and united family, happy—as his last letters reveal—even through the weakness and pain of his decline, in the consciousness of work well done, of a course well finished and brought to completion. No need to breathe over his tomb a timorous " requiescat " : of him we can with triumphant assurance proclaim, *requescit in pace*.

R. A. S. M.

G. F. BROWN

The Right Rev. George Francis Brown, O.B.E., Bishop in Jerusalem, whose tragic death is so deeply lamented over a wide circle, included among his many interests that of Palestine archaeology. The many calls of a very busy life prevented him from taking a practical part in archaeological activities, even in council, but he showed his interest by accepting a Vice-Presidency of the British School of Archaeology in Jerusalem. He was in Palestine as Bishop for only ten years, but he had made two or three previous visits to the country with parties of students of Wycliffe Hall, of which he was Principal. On one of these which coincided with one of the periodic Arab outbreaks, he and his students joined the special police, and his services in that connection were recognized by the conferment of an officership of the Order of the British Empire. Of his general work in Palestine this is hardly the place to speak, but no reference can pass in silence the active devotion that he showed towards the reconciliation of the two national elements in the population.

Dr. Brown showed how sympathy with one section of the population is not necessarily hostility to the other and that it is quite possible to be genuinely friendly to both.

A. M. H.

HANDICRAFTS IN PALESTINE

BY GRACE M. CROWFOOT

PRIMITIVE WEAVING, I. PLAITING AND FINGERWEAVING

I HOPE in a series of articles to describe primitive weaving in Palestine and neighbouring countries and compare it with crafts in the same stage in other parts of the world. There is more to be seen and studied among the Beduin than the Fellahin, they have raw materials, sheep's wool and goat's hair in abundance and leisure to devote to fine spinning and clever finger work, but among the Fellahin also there is much that is unexpected and interesting.

I shall deal in the first paper with the plaits and finger-weaves which probably came first in time, later I propose to describe textiles made by both Fellahin and Beduin on the ground loom. So little has been written on these matters that these observations, though made only over a limited area, may be of use to other students and craft workers.

My thanks are due to Miss Olga Tufnell for the photograph on Plate IV.4; to Mr. Harding for that on Plate III.1; to Dr. Sybil Welch for information on the Assomption Sashes; in the study of the hair-bands at Artas I was much helped by the late Miss L. Baldensperger.

Plaited hair-bands (imlaf; liflaf)

Once as I went down the Suq el Attarin in Jerusalem I was enchanted to see at the far end a glow of brilliant colour, red, purple, blue and gold. It came from great bunches of plaited braids hanging there for sale. I bought several, but on coming out into the daylight realized with a shock that the colours which had appeared so beautiful in the darkness were violent to a degree, the most vivid tints available in the imported knitting wools from which the braids were made. The reason for choosing brilliant colours, whether in imported materials or in handspun and home dyed wool, was obvious when I discovered the commonest way in which the braids are worn. They are used by women to bind their hair into a firm foundation on which to perch their head-dress and they only show a little at the side, just a glint of colour when the veil flows free. The manner of binding is shown in Plate I.1, where Sitt Latifa of Artas posed for me, expressing her satisfaction that it was only the back of her head and not her face that I desired to photograph; her hair is plaited into two pigtails twisted together into a hollow ring and the braids are wound round and round it with the tasselled ends hanging below. Hair-bands of the same kind are common in Silwan, Bet Jala, Abu Dis and other villages round Jerusalem. In some villages, e.g. Surif, there is a different fashion, much shorter narrower plaits are made and these hang from the head-dress over the ears, a substitute for the costly chin chain or silver dangles; here, again, half hidden under the veil, bright colours show up best. Occasionally men use these gay braids for girdles; they are then referred to as *sefif*, *pl. safaif*, to distinguish them from the more popular tablet woven belts (*kamar*) from Damascus. In the Nablus district to the best of my knowledge they are not worn either by women or men.

The makers of these plaits may be men, women, boys or girls; boys especially seem to take pleasure in the craft. I asked a young woman at Artas who possessed an especially pretty braid, who had made it, and she replied: "The wool came from my sister's sheep at Surbahal, my mother spun it for me, I dyed it myself with cochineal and my young cousin (a boy) made it for me."

The method used is that known sometimes as diagonal plaiting, sometimes as finger weaving; really it is a kind of half way stage between plaiting and weaving. A skein of wool is prepared and cut; as the pattern depends on the position of the colours chosen the threads have to be sorted out into proper order, so many of each colour on either side before plaiting begins. Short pieces are plaited in the usual way, beginning at one end, but for the long hair bands a knot is made in the middle of the cut skein and the plait is made in two halves, first from the middle to one end, then, after untying the knot, from the middle to the other end, the pattern being reversed at the middle. The total number of threads used varies, forty being common, but it is always even. The knot or end has to be fixed, sometimes it is held by the foot, sometimes it is fastened to a stick held between the knees as was done by the worker in Plate I.2, sometimes a friend will hold it. The plaiting is carried out as follows: the outermost thread on the right is passed in and out of the other threads, as in darning, to the centre, and then the outermost thread on the left and so on, *da capo*; this can be seen in Plate I.4. One says "as in darning," but actually the workers that I have watched all parted the odd and even threads down to the centre, held them apart with the index finger and passed the thread through the "shed" thus obtained. This accentuates the resemblance to weaving and indeed, the women speak of it as such. "I am weaving" (*Ana binsij*) said Sitt Sa'ada, of Bet Jala, as she began her demonstration at Artas. There is as yet in this technique no permanent differentiation between warp and weft, for each warp as it were becomes a weft in its turn.

Plaiting towards the centre as described above gives a series of V's in different colours as shown in the complete band on Plate I.3. If, instead, the threads are taken slantwise right across the braid the result is like the diagonal plait of mending silk often sold in English shops. I have seen plaits of this kind among the ornamental cords and braids on belts worn by Beduins on the Syrian borders of the Euphrates, but in Palestine all the braids seen were in the V design, plaited to the centre: the local names liken it to an ear of corn (*sabbali*), or to a palm branch (*nakhli*). The usual length of the hair-band is about two yards, the width two to three inches; the number of threads varies, being usually about forty, but one from Silwan had seventy-two threads.

In Artas the women speak of these hair-bands as a new fashion learnt from the Ta'amre, their half Beduin neighbours; formerly the hair was wrapped with strips of coloured cloth. I have no evidence of such work among the Ta'amre to support this statement, but there is a strong resemblance between the hair-bands and Beduin girdles from S. Palestine such as that shown on Plate IV.5 though the latter, as we shall see, is in a more complicated technique akin to twined weave. The simple character of both technique and pattern in the hair braids would support the village view that it is not an old craft with them.

In other lands this kind of pattern plaiting is old and highly developed, and is used for many purposes.

Early examples come from America; fine braided sashes in this technique were found among remains of the Basket-maker peoples in South Western caves which underlie the earliest Pueblo remains and may be of about the time of Christ.[1] Examples are also known among the Ancient Peruvian textiles, some being of a very complicated kind with *à jour* effects.[2] In Europe the earliest discovery is of the Viking period, c. A.D. 1000, from Mammen in Denmark, a diagonal plait in wool worked toward the centre.[3]

Some charming modern examples have been mounted among the specimens of purse strings and braids illustrating a mid-seventeenth century MSS. in the Victoria and Albert Museum; these are worked in fine coloured silks in complicated patterns. A braid very similar was shown at the Chinese Exhibition of 1935-6 in London, dating uncertain, possibly eighteenth century. The technique in a form like that of ancient Peru is said to be in use at the present time in Malaya and the South Sea Islands.[4]

But the best modern examples that I know come from those parts of the world where it is known to have been present in early days, i.e., Scandinavia and the American continent.

In Norway, Lapland and Denmark it has survived as a peasant craft for the making of garters: in Latvia, also, such plaits are used for garters and belts (see examples in the Bankfield Museum, Halifax).

In America the story is more interesting for the craft was learnt by the French colonists of early Canada from the Indian tribes and brought by them to a high degree of perfection. Both Indians and colonists used the plaits chiefly to make belts or sashes; to judge from old illustrations the fur traders must have been fine figures in their greatcoats, beaver hats, broad, gay coloured sashes and garters. Specimens of the Indian and settler's sashes are to be found in many museums (e.g., the Prairie Indian belts in the British Museum made from buffalo wool); indeed, it is often difficult to distinguish between the later Indian and European craftsmanship when in both the same class of imported wool was being used. Among the Indians one of the favourite designs was a barbed band up the centre like a series of continuous arrows and this gave the name of " arrow sashes " to the whole group. The settler's products were commonly known as " Assomption sashes " because most of them came from Assomption county in the Province of Quebec:[1] the women of S. Jean de l'Achigan were especially noted for their craft which they are said to have learnt from the Algonkin Indians. The sashes were often eight to nine inches broad, the very smallest had more than a hundred strands, the usual number being between four and five hundred; the length without the tassels was usually six and a half feet long. With such broad sashes the resemblance to weaving is much enhanced and it is not surprising that all the terms used were taken from that craft. The strands for the sash, stretched from ceiling to floor, were " warped " (*ourdir*), the two sticks that held them were the " tenter " (*tempié*) and the workers were said to " weave " it (*tisser*).

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[1] Charles Avery Amsden. *Navaho Weaving* p. 2 and Pl. 3.

[2] *Primäre Textile Techniken. Wegleitungen des Kunstbewerbemuseums der Stadt Zurich.* 128, p. 12.

[3] Communicated by Miss Margrethe Hald.

[4] *Primäre Textile Techniken, op. cit.* p. 12.

The simple V pattern of the Palestinians was used, but frequently doubled to make a W or reversed to make diamonds. The Indian arrow pattern had several developments, it became toothed (*à flammes*) or lozenge like (*flèches nettes*), or checkered, a proceeding called " flècher les flèches." There was a ready sale for these sashes in Montreal at a price of fifteen to twenty dollars and at one time whole " *habitant* " families made them in the winter time. But the craft later fell on evil days when competition came from imported woven imitations at a dollar or so apiece and the homeworkers were exploited by the traders on whom they depended for their wool. Fashion also changed and men took less pleasure in these gay coloured additions to their dress though they survived for a time among snow shoe clubs and the like. Finally the craft was reckoned dead, but the technique survived among country women for making garters as was revealed at an exhibition in the Art Gallery at Montreal in March, 1907, and at the Quebec Festivals of 1927–1928, when some old women displayed their nearly forgotten skill and once more wove broad scarves. As a result a course of sash making is now included among the subjects taught in the Quebec School of Handicrafts.

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[1] Marius Barbeau. Assomption Sash. *National Museum of Canada Bulletin* 93.

Girdles in twined plaiting (*merireh*)

Girdles such as that shown on Plate IV.5 are worn by Beduin women in S. Palestine ; I saw them among the Masryin when visiting the excavations of Sir Flinders Petrie at Tell el Fara. The Masryin belong to the Nijmat abu Suseyn subsection of the Tarabin, and the people I saw had followed Sir Flinders from Tell Jemmeh where he had first employed them and taught them to dig. This made for the pleasantest of relations, the women were delightfully friendly, allowed me to take photographs and showed me how their girdles were worn and made. One girl had a girdle in the making : she is seen in Plate II.1, with the partly plaited girdle fastened to the whorl of her spindle for support and balls of yarn in a cluster depending from it. It will be noted that she wears the mouth-veil (*lithma ; lithàm*), as girls do in their tribe ; the married women wear the face-veil (*burqu*'), in their case an interlacement of bands adorned with coins.

The plaited girdle is usually about two and a half yards long exclusive of the tassels and two inches wide ; it is wound round and round the waist with the tassels dangling at the side (Plate II.2) : under it another belt is worn which, being white and broader, serves as an effective frame for the coloured work.[1]

The wool used is handspun on a wooden spindle, whorl uppermost, by a short drop and spin method and is then doubled on a similar but heavier spindle rolled on the thigh; the way of spinning is the same as that seen in Egypt, but the direction of the spin is different, i.e., the wool is right or Z spun as in Trans-Jordan.

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[1] This lower white belt (*hezàm*) is made in a different way from the upper one ; a long stick is bent like a bow and a woollen warp is fastened to it like a bowstring. In Plate II.3 a woman is seen making a strip on it, but unfortunately the technique was not observed ; four strips are sewn together to make a belt. This simple way of stretching a warp is known in other lands, cf. the Slave Indian quill belt loom. Kissell. (*Yarn and cloth making*. Fig. 52.) There is also a Latvian Bow loom for making braids in the Bankfield Museum, Halifax.

The women seemed to have some knowledge of vegetable dyeing, but usually they take their wool to Beersheba to be dyed; the preferred colours being red, red brown, orange, blue and green. The order of the colours and the number of threads used naturally varies; in the girdle on Plate IV.5 there are seventy-two threads in pairs, the order on either side being two red, four brown, two blue, four brown, two green, four brown; in the tassels orange and natural black and white are used in addition and cowries are also sewn to the girdle for luck. Among other girdles seen one had sixty-eight strands, the order being, in pairs, nine black, two blue, four black, two red, and another seventy-six strands, the order in pairs being three black, two red, four black, two green, two blue, four black, two green.

To make the girdle a skein of wool is first prepared and cut; the order chosen for the colours determines the pattern, and the threads must all be in pairs. The skein is held at the middle and a crotchet chain of strong cotton yarn is made over it, each loop of the chain embracing one or more pairs of threads. This crotchet chain, which holds the middle and beginning of the plait tightly can be seen in the girdle on Plate IV.5 and on the sample Plate IV.3. For convenience in plaiting so long a piece each strand, instead of being left free as in the Fellahin hair bands, is rolled into a small ball, owing to the clinging worsted-like nature of the wool the balls do not often become unrolled. The crotcheted end is fastened to the top of a spindle or stick supported on the knees or held between them; and the worker plaits towards herself. The method may be described as follows: Take the outermost pair of threads on the right hand side and do not twine them. Pass the pair of threads next to them between them. Then twine the first pair and pass the next pair between them and so on down to the centre twining between each pair passed through. When the outermost pair has arrived at the centre the Beduin worker often ties the bunch of threads for safety, but this is not necessary except for a broad girdle. Next, bring down the outermost pair on the left to the centre in exactly the same way, twining round each of the pairs in between including the pair brought down from the right. Repeat.

The design thus made is similar to the V design of the Fellahin plaits and again we have a technique which is half-way between plaiting and weaving, only here each *pair* of warps becomes a *pair* of wefts in turn and the weave used is not plain but twined. When a sufficient length has been plaited the ends are treated decoratively, sometimes they are fastened together in groups by the usual Beduin joining stitch in colours as in Plate IV.5, sometimes patterns in twined weave are worked on them as in Plate IV.4, in either case they are finished off with tassels.

I have only seen one old example to compare with the technique of the Beduin plait, an Egyptian fragment possibly of a girth, in wool from Karanis. This piece, which may be of the fourth or fifth century A.D. was brought to my notice by Mr. Thomas Midgley, it is in the Chadwick Museum, Bolton.

Bags and Slings in Twined Weave

Bags and pattern bands among the Beduin and the slings used by the Fellahin are made in a twined finger weave.[1] In this weave two weft strands are used together. One is passed below, the other above, a warp, then they are crossed between each successive warp so that their positions are reversed, the strand that was on the back goes to the face and vice versa. Twining in this way between each warp is usual in fine work; in Fig. 1 it is shown as occurring between each pair of warps, in coarser work it may be between groups of four or more warps.

The possibilities of the weave are shown on Plate III.5, the key to which follows here:

(1) Twined weave of two strands with the crossings in the same direction going and returning; effect of a plain weave.

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[1] The term twined weave is used for textiles with a twined warp as well as for those with a twined weft like our examples; the latter are also sometimes called "single twine." "Double twine" is a name sometimes given to another better known finger weave, Soumak, which is wrapped rather than twined. To make the difference clear an example of Soumak is given with the twined weave on Fig. 1.

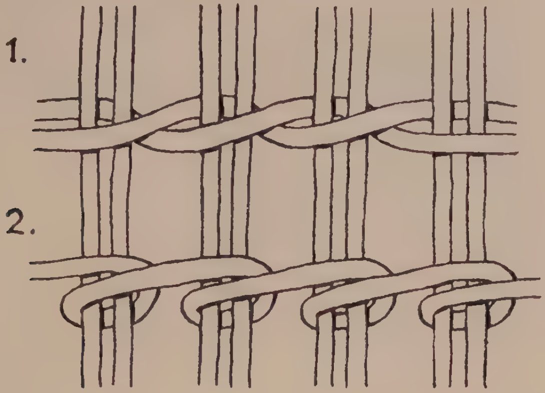

FIG. 1.

1. TWINED WEAVE.
2. SOUMAK OR WRAPPED WEAVE.

(2) Twined weave of two strands with crossings in opposite directions going and returning ; effect of a chevron weave.

(3) Twine of three strands, each passing over two warps and under one.

(4) Twining as in No. 1 with two colours giving a check pattern.

(5) Twining as in No. 2 with two colours giving a chevron pattern.

(6) Pattern in tapestry weave, twining as in No. 2.

(7) Pattern in tapestry weave, twining as in No. 1.

(8) Twill in two colours, herringbone.

All these have been observed in Beduin weaving except Nos. 3 and 8. No. 3 is the twine of three strands used as a border on Chilkat blankets ; No. 8 a herringbone twined twill seen as a pattern border in two colours on Moroccan rugs together with other borders in diamond twill.

The Beduin Bag (*kharita*), *Plate* III.3

During my visit to Tell el Fara I saw several of these attractive bags in twined weave, but my description is based on an account given me by Mr. Lankester Harding, who observed the weaving and took the photograph shown in Plate III.1. The bag is worked with a warp fixed only at one point, the ends being free. The weaving starts from the bottom of the bag. First, a crotchet chain is made as in the girdle and the warps are put through one at a time, being thus held at the centre ; the chain is laid over a stick which gives the exact width of the bag, and, like a tenter, is moved on as work proceeds.

The weaver now takes two balls of white woollen weft and starting at one end of the stick under the crotchet chain works in twined weave round and round. This spiral twine, running always in the same direction, is the same as that shown on Fig. 1.1 and Plate III.5, No. 1. The black lines seen at intervals are made by taking two balls of black weft and twining one row all the way round. For the little check pattern seen below the border, one black and one white weft are taken and twined as in Plate III.5, No. 4, four times round ; the weaver seen on Plate III.1 has arrived exactly at this point in her bag and is holding one white and one black ball in her hand. For the patterned bands the design is built up with several strands of wool twining forwards and back as in Plate III.5, No. 2, with the chevron effect. The manner of working and the result are similar to tapestry weave ; as there is no interlock straight edges are to be avoided and designs with points preferred. The colours used in the bag shown are : in the two pattern bands visible ; upper : black, green, red and white ; lower: brown, orange, black, green, red and yellow. An old bag in my possession is very similar in scheme, but the colours are much deeper and richer. The way of finishing the bag is ingenious ; the warps are turned in, three rows of weft twined over them, and the ends cut off ; the border is then oversewn with a handsome kind of buttonholing in two colours, changed at intervals. Tassels are added ; those on the border are fastened to little tabs in twined pattern weave sewn in with the buttonholing, those on the bottom sewn on by the shanks, sometimes with an added ornament of beads.

Pattern Bands in Twined Weave (*marajin*)

Pattern bands are used by makers of girdles and bags as an additional decoration. For the girdles they are usually made on the warp ends (Plate IV.4), sometimes separately (Plate IV.2) as are the tabs for the bags. The method is the same in all cases, one end of the warp is fixed to a spindle or stick, the other end is free; the weft is twined in and out with the fingers usually in chevrons. The favourite design is the diamond one shown, in blocks with line borders between; the diamond of seven rows is common and is, I was told, the proper one for the beginner to learn on. The piece shown on Plate IV.2 is in silk, the colours of the diamond patterns are, from above down: red with green diamonds, red with blue, red with orange, black with red, red with blue; the effect is bright and rather crude. The work in wool is much richer and deeper in hue, pattern bands on girdle ends being usually in madder reds, brown and orange. The name *marajin* was given me for this pattern work at Tell el Fara, and I have also heard it used of certain patterns in Egypt, but I do not know the exact significance of it.

A similar use of patterned twined weave as ornament on a girdle end from Ezra in Syria is shown on Plate IV.1; in this case the girdle was woven on tablets. There are two hundred threads in the girdle warp and the twining is done over groups of about ten threads; the colouring is bright, red and orange predominating. Another example from Syria was seen in the Trocadero Museum, Paris, a woollen girth made by the Sb'a tribe in plain warp face weave with decorated ends in twined weave; in both these Syrian pieces the chevron is used.

The Fellahin Sling, Plate III.4

The Fellahin sling is made in three parts, the body and two cords; the body is made in twined weave, the cords are plaited. For the body of the sling strong woollen yarn, handspun and doubled, is chosen for both warp and weft. A small skein of warp is first made and stretched between the waist of the weaver and a stick held between his knees. In the illustration, Plate III.2, a man at Bethany is seen with the warp tied to his belt at one end and to a walking stick at the other. Usually there are about thirty-two strands in the warp. The weaver takes two balls of weft, usually in black and white, and works across and back over the warp in twined weave as in Plate III.5, No. 5, chevron wise. At first the twining is over four groups of eight warps each for about eight rows, to make the narrow end of the sling, then the weave is broadened by twining over groups of four strands each for two or three rows and then over two strands for the centre, after which the process is reversed. The curved shape of the sling bowl seems to be given partly by allowing the centre warps to sag, partly by skilful shaping during the weaving.

When the weave is finished the sling piece is untied, and lengths of wool are passed through the looped warp ends and plaited to form the cords in a plait of four. The usual size of the sling proper is 5 inches long, the greatest breadth a little over 2 inches and the cords each about 1 foot 6 inches long.

These slings are sold to tourists as " Slings of David," and the way of making them must be traditional and ancient ; they are used by village boys for scaring birds or shooting them as boys in England use catapults.

At Bethany, where the photograph on Plate III.2 was taken, the boys showed us their prowess. The whirl round the head and the fling of the freed sling end and stone from the arrested upstretched arm are fine gestures and the boys seemed to aim pretty accurately, though I cannot say that like the Benjamites of the Scriptures "every one could sling at an hairbreadth and not miss " (Judges xx, 16). Nor, they told me regretfully, was any one of them as clever as the boy of Bethany who could sling a stone over the valley into the village of Abu Dis, two miles away as the crow flies. But that was long ago, *zaman*.

Twined Weave and its Uses, Past and Present

Twined weaves, plain weaves and Soumak (wrapped) weaves are all found in the Swiss Lake Village culture, made probably on the warp-weighted loom.[1] The twined weaves no doubt derive from the technique of still earlier baskets and mats ; the twine in Fig. 1.1 is identical with the " fitch " used everywhere in basketry to-day. They are made of flax thread and, though some are coarse and may have come from mats, many are so fine that they certainly must be called textiles. The twining is sometimes in distinct rows or pairs with bare warp between, sometimes close pressed looking like a plain weave with little or none of the warp showing : all the twining appears to run in the same direction, the chevron not being exploited at all, and there is no attempt at pattern, although in the Soumak weave the varieties of ornamental wrapping are in a few rare cases quite surprising. At one time there was some controversy as to whether the twining was in the warp or the weft, but in his recent work Herr Emil Vogt shows that it must have been put in with the fingers in the weft.[1] The proof came mostly from the way certain bags are woven and this is of peculiar interest to us for the twined weave in them is worked spirally as in our Beduin bags ; they are, however, much finer in weave.

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[1] *Emil Vogt. Geflechte und Gewebe der Steinzeit.* 1937. The twined pieces are here included under plaiting as " Zwirnbindung " but from the discussion it would appear that they, like our Beduin examples, have a distinct warp and weft and should be considered as true weaves.

Other early twiners were the Basketmaker peoples of America already mentioned on p. 78 as makers of braided sashes ; they twined whole blankets in rabbit skin strips as well as sandals and bags from fibres of yucca and apocynum.[2] The aboriginal Australians and more especially the Tasmanians, also made twined bags remarkable for their fine fingerwork. But in all these cases, so far as I know, there is no attempt at pattern work beyond a few colour stripes. Among modern primitives there is one outstanding achievement, the Chilkat blanket, woven entirely by this method. The body of the blanket is in twined twill with interlock in elaborate designs, the borders being in plain and treble twine. On the Chilkat loom, or frame, as some would call it, the warp hangs free, weighted down only by balls of surplus yarn in membrane bags. Amsden remarks : " Free warp plait begins with the basketry stake and ends with the Chilkat weaving frame."[3] Our Palestinian spindles and sticks supporting warps for plaited girdles and twined bags show stages in between. One example of a further stage in development, twining over a stretched warp, has been given already in the sling, and on the Beduin ground loom pattern bands are often put in by the same method ; sometimes they are narrow, just a few rows of two colour chevron twining giving a secure and ornamental finish to a rug near the fringes, as often seen in Palestine and Trans-Jordan, sometimes broad bands in twined tapestry as on the tent cloths of the Western desert of Egypt and the Amria rugs. These and other developments in pattern weaving, it is hoped, will be described in a later number of the QUARTERLY.

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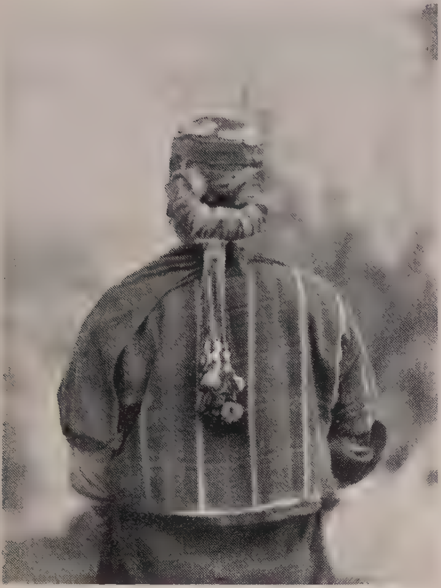
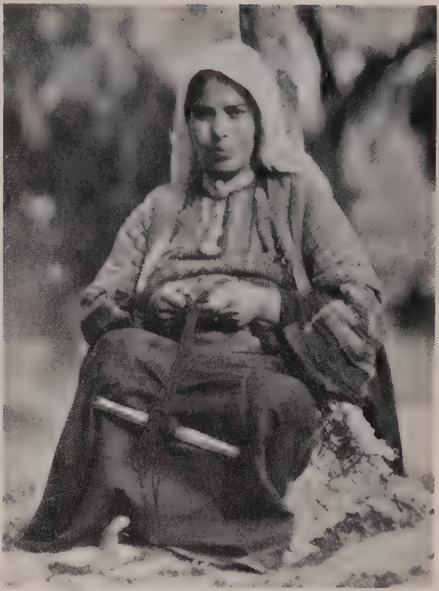
[1] *Vogt. op. cit.* p. 12 ; Fig. 32.

[2] *Amsden, op. cit.* Fig. 4 and Pl. 107. Vogt speaks also of some examples of twined weave from Ancient Egypt but these cannot be verified at present.

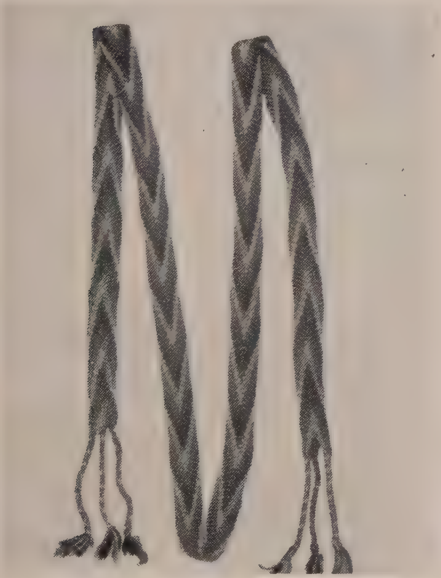
[3] *Amsden op. cit.* p. 19.



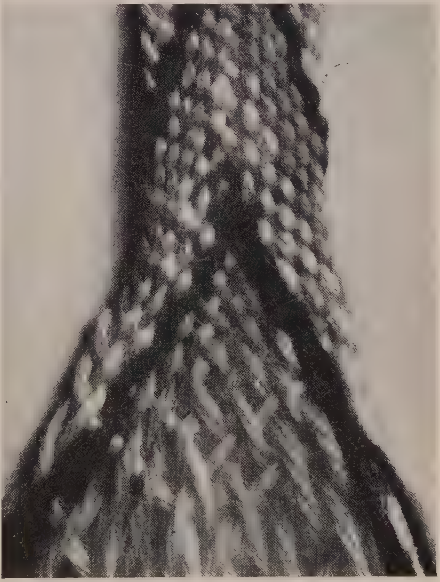
1. HAIR BOUND WITH PATTERN PLAIT. ARTAS.



2. PLAITING HAIR BAND. ARTAS.

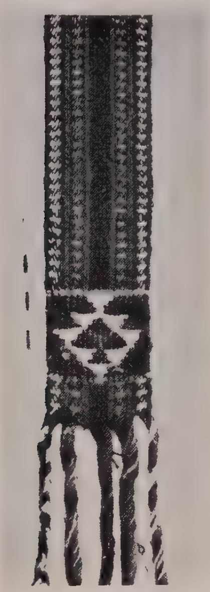


3. FELLAHIN HAIR BAND. JERUSALEM.

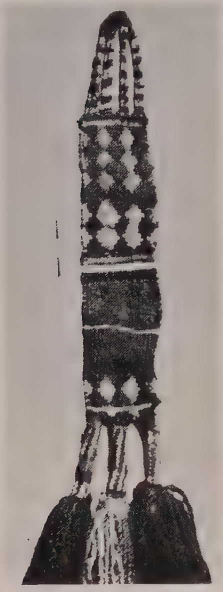


4. METHOD OF PLAITING

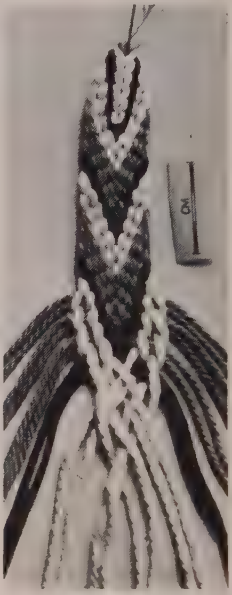
FELLAHIN PATTERN PLAITING



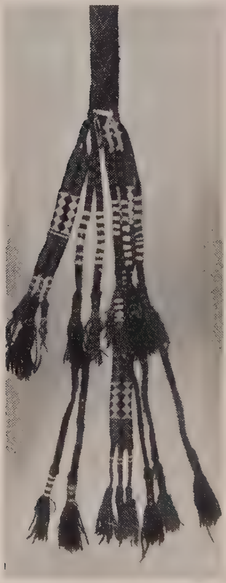
1. TABLET-WOVEN GIRDLE WITH TWINED INSERTION. EZRA, SYRIA



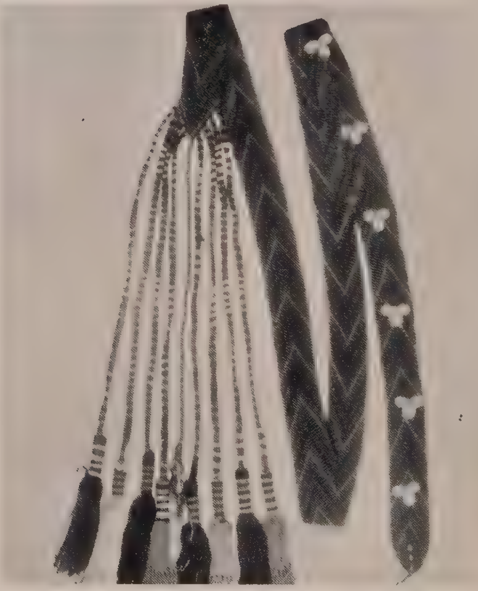
2. TASSELS WITH TWINED WEAVE IN DIAMOND PATTERN. TELL EL FARA



3. METHOD FOR PATTERN PLAITING, TWINED



4. GIRDLE ENDS TWINED WEAVE IN DIAMOND PATTERN. TELL EL FARA



5. BEDUIN GIRDLE. TELL EL FARA

BEDUIN GIRDLES

ON ANCIENT HEBREW INSCRIPTIONS DISCOVERED AT TELL ED-DUWEIR (LACHISH)—III.

BY DAVID DIRINGER

(IV) THE LACHISH OSTRACA NO. XIX—XXI

(*a*) *The Lachish Ostracon No. XIX.*

(Plate V, Figs. 1 and 2)

D., S.W. corner, No. 6899 ; now at the Palestine Archaeological Museum No. 39.799.

An inscribed sherd found in 1938 at Tell ed-Duweir (Lachish), at the base of the S.W. corner of the mound, among the burnt masonry fallen from the tower on the roadway.

Body : grey-pink in and out. Hard fire ; grits 1. Form : irregular, nearly trapezoid. Size (see photograph) : maximum length and breadth : cms. 14.7 × 9.8 ; thickness : cms. 9-10.

Inscription : It seems that the ostracon originally contained nine lines, of which the first five only are more or less decipherable.

Translation :	*Transliteration :*
Line 1. Son.of (a man or the land) Uṣ . 10	Line 1 בן·עץ · 10 . . .
Line 2. Peqaḥ. 11 . . . *ṡh*.	Line 2 פקח · 11 . . ש̇ . . .
Line 3. ‘Ȧmidal. Q . . .	Line 3 ע̇מדל · ק̇ . . .
Line 4. Shema‘ẏahu . Q̇ . . .	Line 4 שמעי̇הו·ק̇ . . .
Line 5. . . . $\overset{‘}{sh}\,\overset{b}{n}\,sh$ . . .	Line 5 $\overset{\text{ע}}{\text{ש}}\overset{\text{ב}}{\text{נ}}\text{ש}$ . . .
Line 6. . . . $\overset{m}{ṣ}$.	Line 5 $\overset{\text{מ}}{\text{צ̣}}$.
Line 7. 11	Line 6 11
Line 8.	Line 8 . . . .
Line 9. . . . . . $\overset{t}{ṭ}$ *ṡh ḃ*.	Line 9 . . . . . $\overset{\text{ת}}{\text{ט}}$שב .

Notes.

Line 1 : the first letter is clearly a *bet* (its form is similar to that of the *bet* of the Ophel-ostracon and of some Lachish Letters) ; the following one is a *nun* : its shape is—I think—a little different from that of the hand-copy : its angularity suggests an earlier form. The word-dividing dot follows all the words. A nearly triangular ‘*ayin* and a *ṣade* in a quite unusual shape, form the second word. There is finally a sign, probably the numeral 10, almost as in the hieratic script. Nothing more is visible on this line.

The two words בּן עץ may indicate either a patronymic or an ethnographical name : “ son of (a man called, or the land called :) Uṣ” : cf. the Biblical *n.p.* עוּץ (*Gen.* x, 23 ; xxii, 21 ; xxxvi, 27 ; 1 *Chr.* i, 17, 42), and the Biblical *n.l.* עוּץ (*Jer.* xxv, 20 ; *Thr.* iv, 21), which was also the motherland of Job (*Job* i, 1).—As to the meaning of the *n.p.* Uṣ, see for example the word עֻצוּ (*Judges* xix, 30) = *q.impt.pl.* from עוּץ, “take advice” (cf. also *Judges* xx, 7 ; 2 *Chr.* x, 9 ; *Prov.* xiii, 10 ; xx, 18, etc.).

Line 2 : The character *pe* has an unusual shape for a cursive inscription : it is lower and larger than those of many ancient Hebrew inscriptions ; see, however, the royal jar-stamps II, 2, etc. The first letter is connected with the next one, but actually, there is no ligature. The *qof* is rather unusual, but as the ancient Hebrew *qof* presents different nuances (see for example the Chart of Alphabets in Prof. Torczyner’s *The Lachish Letters*), we need not pay special attention to this point. The third letter is a *ḥet* with three horizontal strokes, the right vertical stroke is longer at the base than that of the left. The three letters give us the Biblical name Peqaḥ (a king of Israel), which is known also from an ancient Hebrew seal (see *Iscrizioni* seal no. 4). As to the meaning of the name see *Iscrizioni*, p. 167.

After the word-dividing dot there is a numeral sign as in the first line followed by a small vertical stroke : we have here probably the number 11. There are faint traces of the remaining part of this line. One letter seems to be a *shin*.

Line 3 : The slight remains of the first character suggests an ‘*ayin* of a squat shape. The following letters are : *mem*, unusual in form ; and *dalet*, also unusual in form : a squat head and a very low tail. The last letter of the word is probably a *lamed*, although not so clear on the original as in the hand-copy.—If this reading be right, we have here a new, very interesting, name : עמדל. Its interpretation does not present much difficulty : it is a theophoric name composed of the elements ‘*am* (“ people,” see, however, M. Noth, *Die israelitischen Personennamen*, etc., 1928, pp. 76 ff.) and *dal* (“ to lift up,” or rather “ to save ” : cf. Noth, *op. cit.*, p. 180 and n. 4).—As to the names composed with עם cf. the Biblical *n.p.* ‘Ammiel, ‘Ammihud, ‘Ammizabad, ‘Amminadab, ‘Amram, Jerobo‘am, Reḥab‘am, etc., and see Noth, *op. cit.*, pp. 76 ff.—As to the names composed with *dal* (from the root דלה : cf. the Accad. *dalū*), see the Biblical names Delajah, Delajahu, the name דלוי of the Eleph.pap., and the name אלדלה of the beautiful early-Hebrew scaraboid, B.M. 126388, published recently by R. D. Barnett, in *British Museum Quarterly*, XIV 1940, No. 2, p. 31.

After the following word-dividing dot there is a sign which is probably a *qof* (though other readings, such as *waw* or a numeral sign like the hieratic sign for 50, may not be excluded).

There are some traces of the remainder of the line, but they are indecipherable.

Line 4 : The characters are not very clear, but the reading is quite certain : *shin*, *mem*, which is a little different from that of the preceding line, ‘*ayin*, nearly round in shape ; the next character is probably a *yod* : this letter is not clear, but I believe that it is certain, it is high and has a round head ; the following *he*, which has the usual ancient Hebrew shape, is connected with the next letter, which is a *waw*. After the dot there is another sign, perhaps a *qof* like in the preceding line.

Nothing more is visible on the line.

The *n.p.* Shema‘yahu is a Biblical name, which occurs also in *Iscrizioni*, seal No. 40, and in the Lachish Letter IV, line 6.

Line 5 : After some very uncertain traces of a letter, there are : ‘*ayin*, oval in shape, or traces of a *shin* ; *bet* or *nun*, and *shin*, which is rather uncertain. There follow slight indecipherable traces. The meaning is very uncertain.

Line 6 : Traces of two or three indecipherable characters, of which the last one may be a *mem* or *ṣade*, followed by a dot.

Line 7 : Indecipherable traces ; at the end of the line two signs, probably numeral signs 10 and 1, as in Line 2.

Line 8 : Indecipherable traces.

Line 9: Faint traces of some letters: perhaps a *ṭet* or *taw*, a *shin*, and a *bet*. If the reading *taw*, *shin*, and *bet* is right, we have the word *toshab* =" foreign inhabitant." It could be a very important indication for the purpose of this ostracon. —The word תושב appears also (as a *n.p.* ?) in the jar-handle stamp *Iscrizioni*, stamp No. 21, p. 141.

As Mr. C. H. Inge points out (*P E Q* LXX, 1938, p. 254) this ostracon contains a list of names followed by numerals, and the value of the figures remains uncertain. It is probable that the two certain numeral signs are 10 and 1, so that the numbers are 10 and 11.

Similar lists of names have been found at Ophel (*Iscrizioni*, pp. 174 ff.), at Lachish (Lachish Letter I), at Elephantine (cf. Cowley, *Aramaic Papyri*, no. 12), etc.

The purpose of the present ostracon is not apparent. However, if the reading תשב be right, we have here perhaps a statistical schedule of the inhabitants of a street or a district. The first seven or eight lines contain probably the name of the householder and the number of the components of the household, while the last line indicates the number of the inhabitants of the street or district. But, naturally, all this is only a suggestion.

At any rate the principal importance of this inscription is for its names and the palaeography. Beside the names, there are one or two other words (*ben*=" son," and perhaps also *toshab*=" inhabitant") and two numbers (10, once, and 11, twice). As to the names, three are Biblical, one is new, the others are indecipherable. As to the epigraphy: we have on the present ostracon, besides the numeral signs and the word dividing dots, 26 signs, of which 16 are more or less certain, and 10 more or less doubtful. The more or less certain letters are: *bet* (line 1), *dalet* (line 3), *he* (line 4), *waw* (line 4), *ḥet* (line 2), *lamed* (line 3), *mem* (lines 3 and 4), *nun* (line 1), *'ayin* (lines 1 and 4), *pe* (line 2), *ṣade* (line 1), *qof* (line 2), *shin* (lines 4 and 5). For their form see what has been said above, and Fig. no. 1. The more or less uncertain letters may be: *bet* (line 9), *yod* (line 4), *'ayin* (line 3), *qof* (lines 3 and 4), *shin* (line 9); in four cases it is doubtful whether there is *bet* or *nun* (line 5), *ṭet* or *taw* (line 9), *mem* or *ṣade* (line 6), and *'ayin* or *shin* (line 5).

(*b*) *The Lachish Ostracon No. XX.*
(Plate VI)

D., L. 12, Room 1065, No. 6820 ; now at the Institute of Archaeology (University of London).

Seven fragments of an inscribed sherd, which belonged originally to the shoulder of a water jar, found in 1938 at Tell ed-Duweir, in a room on the east side of the Palace. " It was lying blackened on the floor among the ashes of the destruction." " Its interest lies mainly in the fact that a large part of the pot from which it came was also found in the room." (Inge).

Body : light red in and out. Hard fire. Size : cms. 5–13, 3 ×14–20, 4 ; thickness : cms. 0.35–0.55.

Inscription : This ostracon originally contained two lines, of which the first one is nearly complete, and the second is almost indecipherable.

(Preliminary) *Translation :*	(Preliminary) *Transliteration :*
Line 1. In the ninth (year) the house of . . .yahu	בתשעית בית . . . יהו Line 1
Line 2. The wine to R. . .*z* .*r* . . .*l*	הי·ן לר . . . . ז.ר . . . ל Line 2

Notes.

Line 1 : The characters are not very clear, but I consider them more or less certain. The letters are generally large and rough. Of the first character the head only is clear, but some traces of the tail and the context make it certain that the letter is a *bet*. The following *taw* and *shin*, both of them irregular, are quite clear. The next letter is less legible, but is also certain : it is an ʿ*ayin*, of a triangular, irregular shape. The decipherment of the following sign is not easy, but after a minute examination, I am convinced that it is a large, quite irregular, *yod*.—Only a small oblique stroke of the next character is clear, but on the original other traces of a *taw* can be seen, which is thus quite certain.

If the reading is right, we have the word *betishʿit*, in *scriptio plena*,=" in the ninth " (fem.). Although the word is quite simple, it is the first time that we meet it independently, *i.e.* without a noun. It is, however, highly probable that it is an unusual abbreviation of an expression like this : בִּשְׁנַת הַתְּשִׁיעִית (see for example 2 Kings xxv, 1), cf. also בשׁת התשעת of the Samaria-ostraca No. 4–10, 12, and 14 (see *Iscrizioni*, pp. 24–26, and *passim*)=" in the ninth (year)."

There follows a character shaped like a cursive 9 : it is naturally a *bet* in a cursive form. The next two letters are nearly indecipherable : a close examination only indicates that it is a *yod*, very wide and low, and a *taw*.

בית = *bayit* or (*st.cstr.*) *beyt* = " house." It could be also a *n.l.* either complete Bayit (as in *Jes.* xv 1) or rather the first part of a *n.l.* like Bet-Leḥem, Bet-Ṣur, Bet-Shemesh, Betshan, etc.—But the first meaning (" house ") is more probable, as will be seen in the next paragraph.

After the missing part, which could contain two or three letters, there are traces of a letter, perhaps a *yod*, which is followed by a complex, and this seems to be a ligature of *he* and *waw*. This ligature often occurs in ancient Hebrew inscriptions, but the form of the *he* is unusual : it contains four strokes (as in jar-stamps III, 2), and the upper stroke passes over the vertical one on the left, which is usual in ancient Hebrew epigraphy.—If the reading *h-w* is correct and also the hypothesis of the *yod*, it is highly probable that the missing part contained a name, of which there remains only the theophoric termination. This name would be connected with the word *byt*, which precedes the lacuna, *i.e.* it would be the name of the householder. Concerning the unpreserved part of this name, it is useless to make any hypothesis as long as the missing part of the sherd is not found.

Line 2 : This line is mostly indecipherable, but we are able to suggest readings for some letters, and the possible meanings of some words. The first sign seems to be a ligature of *he* and *yod*. In the letter I consider as *he* only two horizontal strokes are clear (the upper one passes over the vertical tail on the left), but there seem to be some slight traces of the lowest stroke. The *yod* is less certain.—Further on there is a lacuna for a letter ; and then some traces of a letter which seems to be a *nun*.

We could thus have—as an hypothesis—the word הי(י)ן *ha-yayin* (see for example the Samaria-ostracon No. 44, where we have *h-y-n*, in *scriptio defectiva*)—" the wine."

The next character is clearly a *lamed* ; it is followed by a letter of which only the head remains : it can only be a *resh*. There is then a relatively large lacuna.—If the reading of the two letters is right, we have here the possessive *lamed* followed by the initial of a name. This initial is *resh*, but it is useless to attempt completion of the name.

Letters are missing where the sherd is broken and where the signs are no longer preserved ; then there is a *zayin*, and some indecipherable traces. The head of a *resh* is then visible, with some illegible signs. The last (?) character of the line seems to be a *lamed*.—I am unable to suggest any interpretation of this final part of the inscription.

General Remarks.

My friend C. H. Inge is certainly right when he writes (*PEQ* LXX, 1938, p. 254), that this ostracon is possibly a receipt like the ostraca from Samaria. In fact, if our reading is correct, we have here the principal elements of the Samaria-ostraca : the date (the ninth year), the supplier (the house of. . . yahu), the goods supplied (wine), the collector (R. . .). Unfortunately—besides the uncertainty of the readings—the names of both the supplier and the collector are missing, but this does not change the character of the inscription. There are, however, some differences between the Samaria-ostraca and this Lachish-ostracon : the *scriptio* in *betish*'*it* and *yayin*, and the indication of the date without the word " year " are the main characteristics of the latter.—As to the probable purpose of this inscription, cf. the Samaria-ostraca, in *Iscrizioni*, pp. 58 ff. and *passim*.

As to the epigraphy : there are twenty characters more or less decipherable : twelve in Line 1, and eight in Line 2. Ten letters are more or less certain : *bet* (Line 2, twice), *he* (Lines 1 and 2), *waw* (Line 1), *zayin* (Line 2), *yod* (Line 1), *lamed* (Line 2, twice), '*ayin* (Line 1), *resh* (Line 2, twice), *shin* (Line 1), *taw* (Line 1, twice), while three letters are doubtful : *yod* (Line 1, twice, and Line 2), *nun* (Line 2), *taw* (Line 1).

I agree with Mr. Inge when he writes (*l.cit.*), after having given the indication of the date on this sherd : " One should not base too much on it but it may not be a coincidence that the last chapter of the Second Book of Kings opens with the same words : " And it came to pass in the ninth year of his reign (*i.e.*, Zedekiah's) in the tenth month in the tenth day of the month, that Nebuchadnezzar, king of Babylon, came, he and all his host against Jerusalem."" The archaeological, palaeographic, and linguistic data are in harmony: the date is the beginning of the sixth century B.C., or the end of the seventh—it is probable that the date mentioned in the ostracon refers to the reign of Zedekiah (596–586 B.C.), so "the ninth (year)" would be c.588 B.C.; if Jehojakim's reign is meant, the date will be c.599 B.C. Other explanations may not be entirely excluded.

(*c*) *The Lachish Ostracon No. XXI.*

(Plate V, Fig. 3)

Pal., Room D 1065, No. 6821; now at the Institute of Archaeology (University of London).

A tiny fragment, found in 1938 on the east side of the Palace, in the Room D 1065, below the floor.

Form: irregular, nearly trapezoid; size of the sides: cms. 4,9 (bottom) × 2 (top) × 4,7 (left side) × 4,4 (right side); maximum height: cms. 4,6; thickness: cms. 0,45–0,55: all approx. Hard fire. Rough surface. Buff wash outside; inner half grey; contains fine crushed limestone.

Inscription: The fragment is inscribed on both sides. "Very little is legible but it appears to be part of a letter like the Lachish Letters" (C.H. Inge, *PEQ* LXX 1938, p. 254).

(Preliminary) *Transliteration*:

Obverse :	*Reverse :*
Line 1. זאל.....	ז̣...ה̇... Line 1
Line 2. הושע̇....	ת̇נ̇... Line 2
Line 3. שתכל̇א...	וש$\overset{\text{ד}}{\text{ך}}$... Line 3
Line 4. וצאח̇...	כ̣שא̇ Line 4
Line 5. והאב̇...	ו$\overset{\text{ד}}{\text{ך}}$ Line 5

Notes.

Obverse :

Line 1: There remain slight traces of two or three letters: only two horizontal strokes of a letter, and the main stem of another character are clear : this last sign is probably a *lamed*, which seems to be preceded by, and connected in ligature with, an *alef*. The first letter is probably a *zayin*. All these characters are extremely doubtful.

Thus, the assertion that this ostracon " begins, ' To my lord,' a form of address familiar from the published Lachish Letters " (*AJSLL* LV, 1938, p. 434) is quite possible, but not manifest. Apart from the uncertainty of the reading of all the letters, the only reasonable hypothesis is that the second letter (*alef*) and the third one (*lamed*) may give us the word אֶל = " to ". But, what is, in this case, the meaning of the *zayin* ? Will it be the *adj*. or *pron. zeh*, in *scriptio defectiva* as in the Phoenician inscriptions,=" this " ? It is hardly believable. Or is it connected with the following letters or with those in the preceding line ? Owing also to the fact that this letter is extremely doubtful, it is useless to discuss the matter extensively.

Line 2 : The first letter, though not very clear, is certain : it is a *he* in its usual ancient Hebrew form (three horizontal strokes ; the upper one passes over the main stem ; the character is very oblique).—The second sign is rather uncertain : I believe it is remainder of a *waw*, which was in ligature with the preceding *he*.—The third character can only be a *shin*, of characteristic shape, similar to that of the *shins* in Lachish Letter III.—The following letter seems to be an ‘*ayin*. The next oblique stroke may be the remainder of a *yod*.

I presume that we have here the name הושעׄ(יהו), the very name which occurs in Lachish Letter III : Could it be a mere coincidence ?

Line 3 : The first letter seems to be a *shin* and the second one a *taw*. The third and fifth characters are almost clear : they are probably *kaf* and *alef*. Less clear—although very probable—is the fourth letter : it seems to be a *lamed* with a very tall stem (as in the first line). The other traces of the line are indecipherable.

Given a doubtful reading and having only a fragmentary line, the interpretation is extremely difficult. However, one could have the word שתכלׄ = שֶׁ (abbreviation of אֲשֶׁר, = "so that", " in order to " or " which," " that," etc.), and תכלׄ, from יָכֹל

(=" to be able ") ; and the initial of a word commencing with *alef*. Or—what is less probable—we could have two words, שת and כלא.—But those are only two of the possible hypotheses.

Line 4 : The first three letters are certain : *waw*, similar to that of the Ophel-ostracon, *ṣade*, as in some Samaria-ostraca, and *alef*, as in some Samaria-ostraca and in some Lachish Letters.—The next character is highly uncertain : it can be a *ḥet* with three strokes, or perhaps four, which is absolutely unusual.—The following traces are indecipherable.

As to the meaning ; it may be :

ו =" and."

צא =*impt*. from יָצָא " (to go out, to come out, to proceed, to march off, to descend, etc.").

. . . ח =initial of another word (such as חוּצָה =" outside, etc.")

Other hypotheses may not be excluded.

Line 5 : The first two letters, though only partially preserved, are quite clear : *waw*, its shape—similar to that of the Siloam inscription and of some seals—is quite different from that of the other one, in the preceding line ; and *he*, which differs slightly from the *he* in the third line ; it is a very cursive, elegant character. The third letter seems to be an *alef*, though in some lights the letter appears similar to a *samek*. A letter follows which may be *bet*.

As to the meaning, I suggest :

ו =" and."

ה = def. article.

If the reading אב is right, we have here perhaps the word אָב = "*father*". Thus, the meaning of the line would be : " and the father ": it would be quite unusual.

Reverse.

Nearly all the letters are extremely uncertain. So it seems useless to make any suggestion.

General Remarks.

This small fragment from the middle of an ostracon, may be a fragment of a letter, as Mr. Inge points out, but the few legible signs—though some are quite well preserved—are not sufficient to make any interpretation reliable.

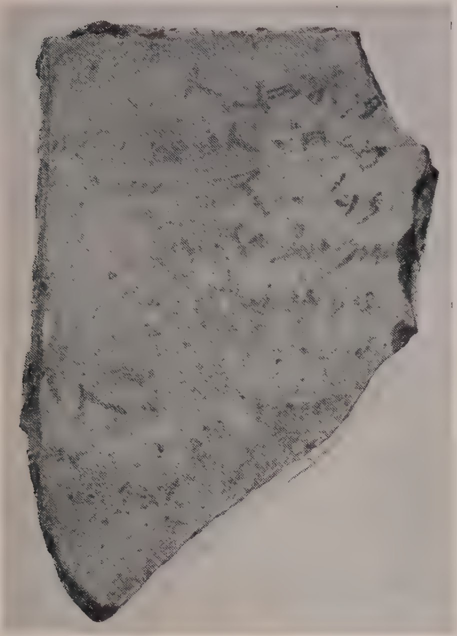


FIG. 1

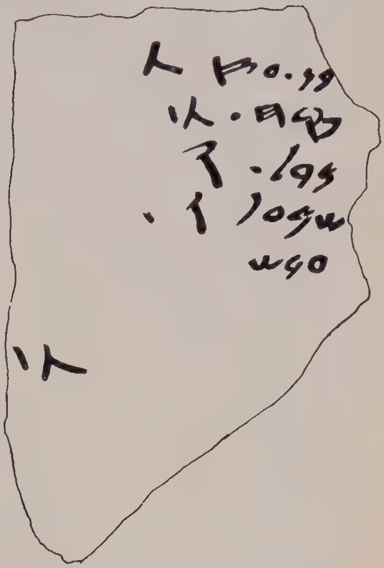


FIG. 2

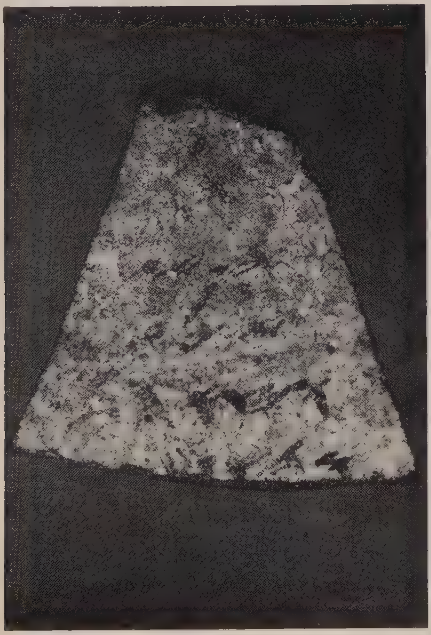
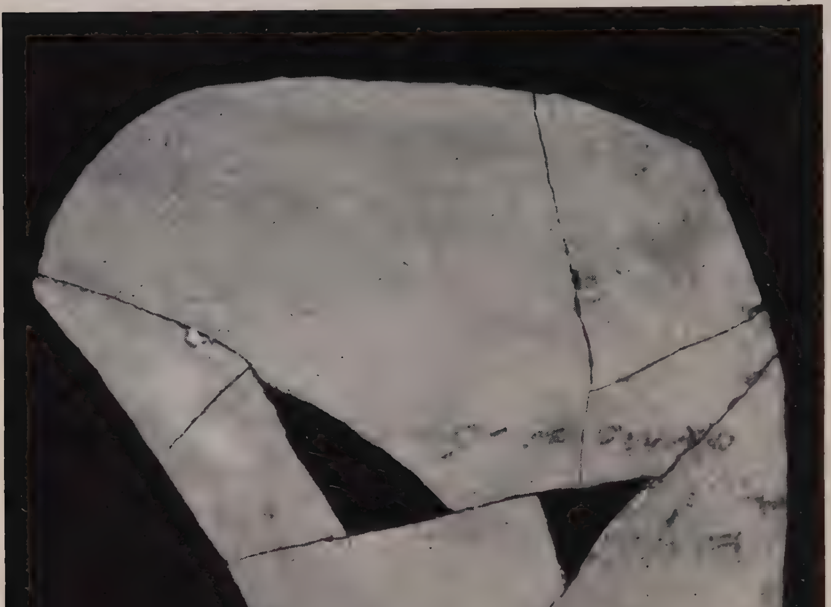


FIG. 3

LACHISH OSTRACA. FIGS. 1 AND 2, NO. XIX. FIG. 3, NO. XXI



LACHISH OSTRACON NO. XX

Miss Tufnell informs me that it is unlikely that this fragment was a part of the " Lachish Letters " already published, as it was found in a quite different place.

Traces of about ten lines—five on each side—can be seen on the sherd. The right side (in the obverse) seems to be the beginning of the lines of the ostracon, but on the top, at the left, and also at the bottom, where only the upper part of the letters have been preserved, the ostracon is probably incomplete. Added to this, there are also many lacunas in the preserved part of the sherd.

The preservation of the obverse is not good, but the reverse is incomparably worse : the writing is practically illegible. At any rate, many traces of single signs are visible, but only a very few of the letters are more or less certain (only one is absolutely certain), and some characters resemble each other. So that my suggested readings may be considered as more or less doubtful.

In these conditions, besides a few—very uncertain—words, the real importance of our small document is only for the palaeography, and naturally only for the definite letters. There are to be seen fifteen more or less certain signs (fourteen on the obverse, and only one on the reverse), and traces of sixteen rather doubtful characters (five on the obverse and eleven on the reverse). The certain letters are : *alef* (O., Lines 1, 3, 4, 5) *he* (O., Lines 2, 5), *waw* (O., Lines 4, 5), *kaf* (O., Line 3), *lamed* (O., Lines 1, 3), *samek* (R., Line 4), *ṣade* (O., Line 4), *shin* (O., Lines 2, 3), *taw* (O., Line 3). The doubtful letters may be : *alef* (R., Line 4), *bet* (O., Line 5), *he* (R., Line 1), *waw* (O., Line 2, R., Lines 3, 5), *zayin* (O., Line 1, R., Line 1), *ḥet* (O., Line 4), *nun* (R., Line 2), *'ayin* (O., Line 2), *shin* (R., Lines 3, 4), *taw* (R., Line 2) ; in two cases (R., Lines 3 and 5) there may be *dalet* or *resh*.—In this connection I consider the following letters as characteristic : Obverse : *alef*, *he*, *waw*, *ṣade*, *shin* ; Reverse : *samek*.

A HEBREW SHEKEL OF THE FIFTH CENTURY B.C.

By A. Reifenberg (Jerusalem)

[See Plate VIII]

The coin to be described here was acquired about five years ago and is said to have been found in the vicinity of Hebron. It may be described as follows:
AR 16mm; 3.88 grm.

Obv.	Rv.
Male bearded head wearing fillet to l. Eye full. Hair partly shown by granulated lines and taken up in knot at back. Border of dots.	Female head to r. wearing necklace (Aphrodite-Astarte?). Hair falling in club on back of neck. Eye full. She wears an ear-ring, which at the same time represents letter "ayin." Inscr. beg. in field r. below "בקע"="one half." All in incuse square. Chiselmarked.

Style of coin. The coin is of archaic character. Both corners of the eye are visible as seen from the front and the face of both reverse and obverse show the formal smile, which is generally absent from coins later than the first half of the fifth century. Both heads show a border line of pearl dots on the upper part of the head and that of the woman has the same device at the lower end of the neck, where it might also represent a necklace. Such border lines are also absent on Greek coins of the fifth to fourth century.[1] The hair is tied in a knot at the back, a feature which is characteristic, for instance, of Athenian coins of the late sixth to the end of the fifth century.[2]

The obverse of the coin resembles the bearded heads of the fifth century coins of Gaza,[3] and most strikingly so one on a " Philisto-Arabian " coin found in Palestine and published by Lambert,[1] who attributes it to the fifth century. Somewhat similar bearded heads are found on the coins of Lycian dynasts of the fifth century[2] and there appears to be some stylistic relationship to some heads on the Persepolis rock reliefs.[3]

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[1] K. Regling: *Die antike Munze als Kunstwerk* (Berlin, 1924), p. 96.

[2] K. Regling, *l.c.*, p. 36, and Table IV and VII.

[3] G. F. Hill: *Cat. of Greek Coins in the B.M.*, Vol. Palestine, Pl. XIX, No. 14, etc.

The female head on the reverse has likewise much in common with the Aphrodite represented on these Lycian coins[4] and on early coins of Cnidos.[5] Besides these the female head on a fifth century coin of Gaza[6] may be compared to it. Palestinian " pillar Astarte " figurines, which go down to the sixth century, also show a certain relationship, although they are, of course, of much cruder workmanship.

Whilst in the case of purely Greek coins all those aforementioned characteristics would point to a period not later than the early fifth century, our coin, struck in a corner remote from the centres of Greek culture, most probably dates from a somewhat later period, say about the middle of the fifth century.

The inscription. The inscription clearly reads *beqa'*, i.e., " one half," the designation of a half shekel, well known from the Bible. (Gen. xxiv, 22 and Exod. xxxviii, 26) and from a number of stone weights of approximately 6.1 grm.[7] found in Judaea. The engraver of the coin did not have enough space for the last letter and has therefore put it in the middle of the head, a procedure familiar from other coins of the Persian period.[8]

The script is clearly Hebrew ; the shape of the letters, however, is slightly different from those on seals, stone weights, etc., dating from the eighth to sixth centuries. The " beth " is more rounded, a feature characteristic of Phoenician coins.[1] Although somewhat similar forms of *qoph* do occur on earlier inscriptions, the letter employed here resembles most closely the archaistic writing on the late Hebrew shekels[2] and may represent a transitional form between the old Hebrew and the shekel characters. We see therefore, that the script is well in line with the chronological classification arrived at on the basis of stylistic features.

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[1] *QDAP*, II, 1932, p. 1 and sq. (No. 50).

[2] F. Imhoof-Blumer : *Portraitköpfe* (Leipzig, 1885), Pl. III, No. 9.

[3] A. V. Pope : *A Survey of Persian Art* (1938), Vol. IV, Pl. 91-93.

[4] E. Babelon : *Traité*, II, 2 and Pl. XCIX.

[5] B. V. Head : *Cat. of Greek Coins in the B.M.*, Vol. Caria, Pl. XIV, and Regling, *l.c.*, No. 169.

[6] G. F. Hill, *l.c.*, Pl. XIX, No. 13.

[7] D. Diringer : *Le Iscrizioni Antico-Ebraiche Palestinesi* (Firenze, 1934), pp. 277 sq. and a weight in the present writer's possession.

[8] M. Narkiss : *Coins of Palestine*, II (Jerusalem, 1938), Nos. 1-11, pp. 87–88 (Hebrew).

The monetary unit. The coin weighs 3.88 grm. and—as in the case of the " Philisto-Arabian " coins (3.6–4.0 grm.) the Attic standard of a drachm (max. 4.36 grm.) was aimed at. This introduction of the Attic standard into Palestine is by no means astonishing. We need not describe here the strong cultural influences of the West on Palestine, but as an example let us only quote the import of Greek ceramics which started in the seventh and sixth centuries already.[3] The Athenian silver money had become almost an international currency in the fifth century and was accepted by both Greeks and non-Greeks in preference to all other coins.[4] No wonder then that it was imitated, or that other coins were struck on the same standard in many parts of the ancient world, the " Philisto-Arabian " coins of the fifth century being but one of many examples. Our coin serves as additional proof. We know that in the sphere of the Attic standard the didrachm, or stater, was the original monetary unit.[5] After the reform of Hippias (514–511 B.C.) this didrachm weighed 8.73 grm. (max.). Besides it is interesting to note that the Septuaginta always translates " shekel " as " didrachm." We, therefore, have before us half a didrachm (light stater) or half a shekel of Attic weight.

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[1] B. V. Head : *Historia Nummorum* (Oxford, 1911), Table IV, 7.

[2] Hill, *l.c.* Pl. XXX, and A. Reifenberg, *Ancient Jewish Coins* (Jerusalem, 1940), P*l.* X.

[3] J. H. Iliffe, *QDAP*, II, p. 15, 1932.

[4] B. V. Head, *l.c.*, p. 373 ; besides an early fifth century coin of Aegae was found at Atlit (Lambert, *l.c.*) and fourth century coins of Attic standard in numerous other instances.

[5] Pauly-Wissowa : *Realenzyklopädie*, s.v. " Stater," p. 2,176.

Attribution of the coin. We have seen that the coin was struck about the middle of the fifth century. Not only because of its provenance, but especially because of the Hebrew inscription, the coin was certainly minted in Palestine. It might of course have been struck by one of the local non-Jewish rulers, as the coins of Gaza for instance. But this possibility seems to be rather remote because of the typical Hebrew inscription, for the people of the Philistine cities at all events spoke a different language (Neh. xiii, 24). Besides *beqa'* seems specially to denote the sacred Jewish levy, since in Exod. xxxviii, 26 the word is so explained. (" A beka for every man, that is, half a shekel, after the shekel of the sanctuary.") The view that *beqa'* is a specifically Jewish word is furthermore supported by the fact that all stone-weights bearing this inscription were found in Judaea proper.[1]

The heathen character of the coin of this period in no way disproves the assumption that the coin was struck by a Jewish authority, since not only seals of the eighth to sixth centuries, but also the ' Yehud " coins[2] of the fourth century show the same imitation of heathen representations. Even the Talmud did not take offence at this procedure when describing the " coins of Jerusalem " as having human representations on them[3] and the Midrash[4] curiously enough describes a " current coin of Mordechai", which shows Mordechai on the one side and Esther on the other.

In assuming that our coin comes from a Jewish mint, we can think of only one person who could have enjoyed the right of coinage at that time, namely Nehemiah, who was sent to Palestine in 445 as governor of Judaea. True enough, there may have been Jewish governors after Zerubbabel (Neh. v, 15), but apparently this post was abolished by the Persians in the fifth century, since there was no governor when Ezra came to Jerusalem in 458 B.C. On the other hand, Nehemiah had no immediate successor.[1] He had the full powers of a governor, best illustrated by the fact that he was even allowed to rebuild the walls of Jerusalem. Although subordinated to the satrap of Abar-Nahara (Beyond the River), it is quite plausible that Nehemiah's powers were such as to allow of the minting of coins. A parallel is found in other parts of the Persian Empire, where the internal administration was left in the hands of local dynasts under the supreme authority of the satrap ; as e.g. Lycia, Cilicia, etc. In all such places[2] [3] not only the satraps, but also the local dynasts or the municipalities had the right of coinage. A further example is afforded by the aforementioned coins of Gaza.[4] The assumption that our coin was minted under Nehemiah's authority is furthermore strengthened by the fact that Nehemiah ordered the temple-tax to be one-third instead of one half a shekel (Neh. x, 32) as in the past. We have seen, that the stone-weights of the eighth to sixth centuries[5] weighing 6.1 grm. and inscribed *beqa*‘ were based on a shekel of about 12 grm. The light stater of Attic standard, however, which found its way into Palestine in the fifth century, weighed only ca.8 grm. By reducing the temple-levy to one-third of the old standard (Neh. x, 32) Nehemiah succeeded in fixing its weight at half of the new Attic standard, i.e. to ca. 4 grm. (half a didrachm). This new *beqa*‘ is represented by our coin.

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[1] Diringer, *l.c.* pp. 277 sq.

[2] E. L. Sukenik, *JPOS*, XIV (1934), pp. 178 et sq. and XV (1935), pp. 341 and seq. ; A. Reifenberg, *l.c.* pp. 1 and seq.

[3] *Baba Qama* 97b.

[4] *Midrash Esther Rabba*, 129d.

The coin described here is not only the oldest Hebrew coin, but it is likely, however modestly, to throw some new light on one of the least known periods of Jewish history.

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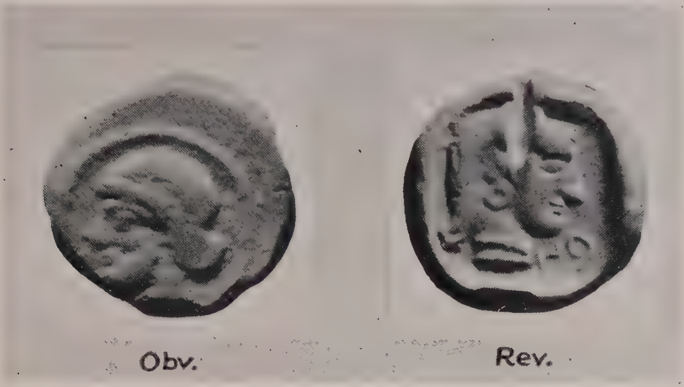
[1] H. Zucker : *Studien zur Jud. Selstverwaltung im Altertum* (Berlin, 1936), pp. 19 et seq.

[2] Head, *l.c.* p. 688.

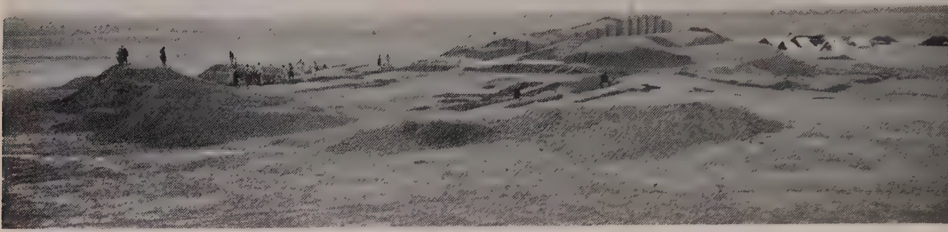
[3] Head, *l.c.* p. 715.

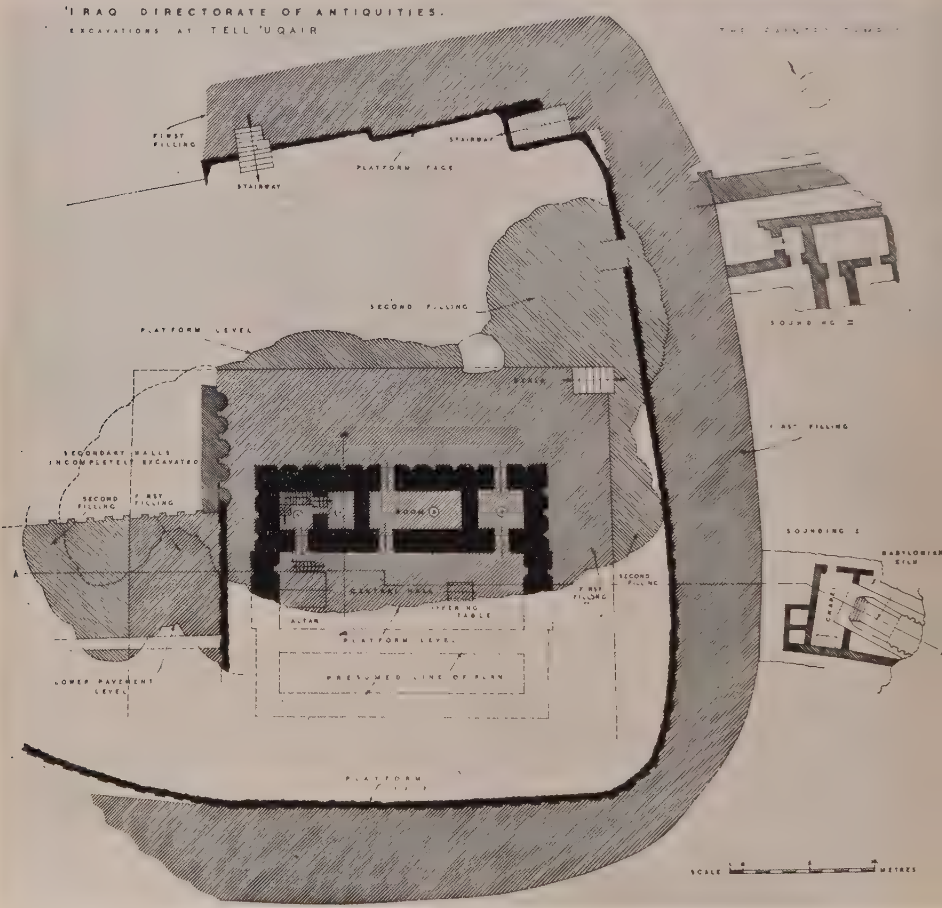
[4] Hill, *l.c.* pp. lxxxiii et seq.

[5] O. R. Sellers, *The Citadel of Beth Zur* (Philadelphia, 1933), p. 60.



A HEBREW SHEKEL OF THE FIFTH CENTURY




'IRAQ DIRECTORATE OF ANTIQUITIES.
EXCAVATIONS AT TELL 'UQAIR
THE PAINTED TEMPLE
FIRST FILLING
STAIRWAY
PLATFORM FACE
STAIRWAY
SECOND FILLING
PLATFORM LEVEL
SOUNDING NO II
BENCH
FIRST FILLING
SECONDARY HALLS INCOMPLETELY EXCAVATED
SECOND FILLING
FIRST FILLING
ROOM B
SOUNDING I
BABYLONIA
KILN
CHAPEL
A
SECOND FILLING
FIRST FILLING
CENTRAL HALL
OFFERING TABLE
ALTAR
PLATFORM LEVEL
PRESUMED LINE OF PLAN
LOWER PAVEMENT LEVEL
PLATFORM FACE
SCALE
METRES

TELL 'UQAIR. VIEW OF SITE AND PLAN OF EXCAVATIONS

RECENT DISCOVERIES OF THE IRAQ DIRECTORATE OF ANTIQUITIES

By Seton Lloyd

It may be of interest to give a short account of the programme of excavation and restoration, successfully carried out by the Directorate of Antiquities of the Iraq Government during the working seasons of 1940-41. In the Islamic field, work has been mainly restricted to Samarra, where much new information has been obtained about the planning of the great northern mosque, abu Dulaf,[1] further private houses have been excavated on Madaq al Tabil, the wide central boulevard, and a sum of money has annually been allotted to the revetting and restoration of the Friday Mosque and Malwiyah Minaret. A first detailed publication of the department's previous work at Samarra has also appeared from the government press.[2] For pre-Christian research, two sites were selected for excavation. One was a small, pre-dynastic mound near Tel Ibrahim, the Kutha of history ; the second was Tell Der, near Sippar, where excavations made by Budge in the last century yielded a large collection of tablets. Both sites have produced striking results, and, since the period of occupation of the first appears to have extended from the beginning of the fourth millennium until the middle of the third, whereas the second site was occupied from the Dynasty of Agade until the Christian Era, the finds together produce an interesting continuum of Mesopotamian culture, during the first forty centuries of its history.

The ancient city of Kutha[3] (the Cutha of the Bible ; 2 Kings xvii, 24 and 30) whose inhabitants were carried off by King Sargon II, of Assyria, to Samaria in Palestine, and became the ancestors of the New Testament Samaritans, is now an enormous mound in the desert between the two rivers, about forty-five miles south of Baghdad. A little to the north there is a group of tiny hills, one of which is known as Tel al 'Uqair. The discovery of this site was due to the normal routine of inspection work by the Directorate of Antiquities. A collection of shreds submitted to the department included painted pottery of the Al 'Ubaid period in the first half of the fourth millennium B.C., and clay mosaic-cones such as are now always associated with a pre-dynastic temple. After this, a single visit to the mound was sufficient to convince the writer of its importance. Excavations were begun in March, 1940, and continued in April, June and November, 1941. They yielded the most astonishing results.

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[1] See Cresswell, " Early Muslim Architecture," Part II, page 279.

[2] " Excavations at Samarra," two vols., Directorate of Antiquities, Iraq.

[3] Mackay, " Ancient Sites of Iraq," page 16.

Before the end of the first season's work, we had something which has never before been seen in Mesopotamia ; a prehistoric temple of the Uruk period, about 3,800 B.C., standing upon its own high platform, with its walls, in some parts over four metres high, silhouetted against the sky, and visible from the surrounding desert. Furthermore, four of the surviving chambers and more than half of the central hall had their walls ornamented with brightly coloured frescos. Both temple and platform were built of the rectangular sun-dried bricks familiar in this period at other sites such as Uruk itself,[4] and the façades of both were ornamented, as usual, with alternate buttresses and recesses. The platform was not oval, as one has now come to expect, but roughly " D "-shaped, having fine, monumental flights of steps leading up to it at the two corners. There was an intermediate terrace on two sides, and a third staircase leading from this to the temple itself, which stood upon a thick pavement of bitumen. The platform stood at one point to its full height of something over four metres, and here at the summit, a deep band of large, hollow ended mosaic-cones remained in place.[5] The temple itself (which has come to be called " The Painted Temple "), was planned very much like the contemporary " White Temple " at Warka, with a long central hall and ranges of

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[1] Heinrich, " Deutschen Forschungs Gemeinschaft," 1937, page 49.

[2] Nöldeke : " Ausgrabungen in Uruk-Warka," Taf. 44.

four rooms on either side. An important difference was that, whereas the Warka temple has the " portal " arrangement of doors at either end, the Painted Temple is entered at the side and has a complicated altar at one end of the hall.

The frescos were painted in several colours on the soft mud-plaster of the interior wall-faces, with a preliminary ground work of white. It proves disconcertingly difficult to recover more than a limited number of the designs, since the whole building had at a later date been filled in solid with heavy brickwork, in order to make a foundation for a new temple. A great deal of time was spent over their treatment, every surviving fragment being accurately copied in colour, before it faded, and two important panels transported to the Iraq Museum. In most cases they consisted of a crimson or plum-coloured dado about a metre high, a deep band of geometric ornament in red, yellow, black, brown and blue-grey, and above this a frieze of human and animal figures outlined in red and filled with other colours. Of the figures unhappily little, but the legs, remained, the bodies fading out, as the painting neared the surface of the mound. The front of the altar was painted to represent the façade of a temple in miniature and was guarded at the side by two extraordinary spotted lions, or leopards, one sitting on its haunches and the other in the act of springing. These were comparatively well-preserved.

It has occurred to us that another contemporary building at Warka, the " Red Temple," may perhaps have been ornamented in the same way, though its walls apparently nowhere remained standing high enough to reach the top of the red-painted dado.[1]

Adjoining the platform on one side we discovered a subsidiary chapel of the Jamdet Nasr period. The several occupation levels separating this building from the Painted Temple, and the absence of a single shred of painted pottery in or near the earlier building, helped us to attribute the latter to the Uruk period. The chapel produced a magnificent collection of Jemdet Nasr painted vessels in twenty-five ornamental jars, some of them nearly a metre in diameter, bearing the characteristic polychrome designs of the period, and others painted in a new technique, a plain chocolate-coloured line on a cream ground, with interesting representations of fish and birds. An archaic tablet from the same provenance gave the name of the shrine and its builder.

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[1] Nöldeke, " Ausgrabungen in Uruk-Warka," 1934-5.

In another part of the site we excavated buildings, also in sun-dried brick, of the Al 'Ubaid period, and obtained a new collection of this earliest south Iraq painted ware, with fine, conventionalized pictures of animals and birds. We penetrated through seven metres of similar buildings beneath, before reaching virgin soil. Our picture of a characteristic early Sumerian site was carried into the third millennium B.C., when the excavations were continued in autumn, 1941, under the direction of Sayed Fuad Safar, M.A. In the neighbouring cemetery he excavated graves of the three Early Dynastic periods, and obtained an important collection of cylinder-seals, bronzes and pottery.

TELL DÊR.

The mound known as Tell Dêr was identified by Langdon as Agade, the capital of King Sargon of Akkad.[1] Budge did some excavations on the site in 1891,[2] and was inclined to think it was merely a residential suburb of Sippar, the modern Abu Habba which can be seen from Dêr. The site lies on the Yusifiyah canal, about sixteen miles south of Baghdad. It is triangular in shape, bounded on two sides by the remains of enormous, pisé town walls, and on the other by a cultivated depression, which must represent an ancient irrigation canal, or even an old bed of the Euphrates itself. Excavations were conducted contemporaneously with those at "'Uqair," under the direction of Sayed Taha Baqir, M.A. After a number of "search-trenches" had been made, work was confined mostly to one of the higher mounds at the southern end of the site, and here a large public building was discovered and traced. Over part of its area, it was carried down, stage by stage to virgin-soil, and a complete cross-section of the stratification was thus obtained. The more tangible results were a collection of about twenty-five extremely fine cylinder seals, some with inscriptions; a collection of about 300 tablets of various periods, which, when fully studied, will, it is hoped, throw new light on the identification of the site; and a collection of pottery from which a complete corpus of shapes is at present in preparation—ranging over two millennia of Mesopotamian history. The first five occupation levels, from the bottom, were Akkadian. Nos. 6 and 7, dated from the dynasty of Isin-Larsa, No. 8, was Babylonian and on the surface were remains of the Hellenistic period.

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[1] Mackay, "Ancient Sites of Iraq," page 13. See also Andrae and Jordan, "Iraq," Vol. I, page 56.

[2] Budge, "Nile and Tigris," Vol. II, page 260.

ADDITIONAL NOTE.

The temple at Tel al ʿUqair bears a striking resemblance to that of Beihan in the Aden Protectorate. The Beihan temple shows "buttress and recess" construction, and it too stands on a platform. The Beihan temple, however, is built of stone and there seems to be no constructional reason for the adoption of the recessed design. This applies even more to the so-called "Treasury" at Beihan, which is of Cyclopean architecture and enormously strong.

When I first saw these buildings in 1938 I was puzzled why this type of reinforcement had been adopted in buildings which are obviously of such great strength. In the Spring of 1940 I saw the remains of exactly similar buildings which had just been unearthed at Axum in Abyssinia. This suggested that the style had become conventional. If it can be traced to a Mesopotamian brick original of the Tel al ʿUqair type, the mystery is solved: it was simply the adaptation in stone of a brick original which had become hallowed by ecclesiastical convention. It is true that so far the earliest known date for the Beihan temple is its restoration by King Shahr Geilan about 900 B.C., but ecclesiastical architecture is always conservative. Is it possible that we have in the Beihan temple another link with the Mesopotamian and Southern Arabian cultures?

S. W. PEROWNE.

REVIEWS AND NOTICES

Jesus in the Light of History. By A. T. OLMSTEAD. Pp. xvi, 318. 1942. New York, Scribners.

PROFESSOR OLMSTEAD is well known for his histories of Assyria and of Palestine and Syria. He has now brought the same qualities which marked those works to a study of the life of Jesus, and enabled us to see the greatest figure of history through the eyes of a historian. The reader is not long in discovering that if this brings advantages it also brings many disadvantages.

That the author has a great wealth of knowledge is abundantly manifest, and particularly is he well informed on the archaeology of Palestine, and on the historical background of the age of Jesus. He is also familiar with present-day Palestine, and uses his knowledge in this field to light up the story. But much more than this is needed for an adequate life of Jesus. The main sources for that life are, and must be, the Gospels. Any critical study of the life of Jesus, such as Professor Olmstead essays, should begin with a critical examination of the Gospels, and a defence of the principles which govern the author's use of them. No such study is offered, however, though the work is based on the conclusions to which the author supposes such study would lead. Occasionally he offers some grounds for his assumptions, but they are so astonishingly slight that even the general reader will be inclined to ask how far he may trust any of the facile statements that abound.

The problem of the date and authorship of the Fourth Gospel is settled almost in a line, and settled, the author claims, quite incontrovertibly (p. 159). This somewhat breath-taking claim rests on the consideration that contemporaries of Jesus are represented as asking " Does the Messiah come from Galilee ? " From this it is concluded that the Gospel must have been written before the " discovery " in A.D. 40 that Jesus was born in Bethlehem—a " discovery " to which Professor Olmstead attaches no historical value. Indeed, he defines the date of the Gospel more closely than this. He declares that John published his *Memoirs* shortly after the Crucifixion (p. 255). Yet, despite this early date, the Gospel is treated in a very cavalier fashion. In general its narratives are accepted as historical, while its addresses are rejected. Yet wherever anything stands in the narratives in disagreement with Professor Olmstead's theories, it is rejected without more ado. Thus, the talk with the Samaritan woman is accepted *in toto*, with the exception of " I that speak unto thee am he." This, we are told, has been edited, so that we do not know what Jesus said at this point (p. 97). This is because Olmstead denies any messianic consciousness of Jesus. He therefore dispenses with everything in any of the Gospels which implies any messianic consciousness on the part of Jesus. He similarly eliminates every apocalyptic element from the teaching of Jesus.

The Synoptic Gospels are treated with less courtesy than the Fourth Gospel. Every element of the birth stories, and the story of the visit to Jerusalem in boyhood, are swept away. For the rest the Gospels are cited when they do not conflict with the author's theories, and ignored when they do. Often he will cite, without comment, in a completely objective way Gospel incidents, parables and miracles. He raises no demur when he records the raising of Lazarus or the resurrection of Jesus. But when he recounts the story of the healing of the man born blind, he observes : " Science tells us categorically that no man blind from birth ever recovered his sight through a miracle. We moderns accept the dictum " (p. 155). This seems to suggest a somewhat ambiguous attitude, hardly to be expected in a historian, who makes the bold claim that in his pages " At long last Jesus makes his own appearance in the full light of history " (p. xi). The reader is entitled to clearer guidance as to whether the raising of Lazarus and the resurrection of Jesus are to be treated as historical or not, and if they are, why they should be more easily believed than the healing of the blind.

Great chronological claims are made. The author believes that he can give the exact length of the ministry of Jesus, and that it extended to precisely 475 days, and terminated on

7th April, A.D. 30, in the Crucifixion. The reader will again suspect this facile exactness in view of the slender basis he is offered for the assumption that Jesus was about fifty years old at the time of his ministry. This is said to be " proved " by the reported casual utterance of some of his hearers " Thou are not yet fifty " (John viii, 57), and to be a justifiable conclusion on *a priori* grounds, since only such an age could justify the assumption of the prophet's authority (p. 1). The reader may rub his eyes, and recall the case of Jeremiah, and may ask himself for how many of the prophets such an age is demonstrable, or whether Isaiah was really about fifty at the time of his call, and about ninety at the time of Sennacherib's invasion of Judah.

Professor Olmstead favours the view that the Gospels were written in Aramaic. He refers disparagingly to the translators of the Authorized Version, the literary grace of whose work is due not to themselves, but to their literalness in reproducing Semitic idiom (p. 114). That there is a large element of truth in this is generally agreed, but when the reader has compared the music of the A.V. with the unliterary quality of some of the baldly literal translations he is offered in this volume, he may conclude that he owes something to the translators after all. Nor is it clear why we should be offered Graecisms in an English rendering of sayings which by general agreement were uttered in Aramaic, whether or no our Gospels were written in Aramaic. " But having found one pearl of great value, going, he sold all, whatever he had, and bought it " (p. 124) may be cited as a good example of how translation should not be made.

In general the picture of Jesus is not convincing, and one is left wondering wherein lay his greatness, and why he should so profoundly have affected history. But to be fair to Professor Olmstead, he distinguishes sharply between the Jesus whose life he claims to have set forth and the Christ who has so profoundly affected history. He supposes that after the days of Jesus the Jerusalem disciples, under the leadership of Peter and John, went into almost complete stagnation for a decade. That it was not quite complete was due to the fact that they could not forget the personality of Jesus. Suddenly, however, they were roused from their somnolence by an event which affected them more profoundly than had the resurrection or Pentecost. This was the order of Caligula to set up his image in the Temple. Under the influence of this event the messianic character of Jesus, which had been growingly stressed, was emphasized anew, and his Davidic descent was discovered (pp. 254 ff.). All this, however, has little relation to historical Christianity. For " when the Antioch proletariat named the converts Christians, the future of a new *religion* was forecast. To pagans and to Gentile converts alike, Christos was never a mere translation of the Jewish title Messiah ; whether Christos or Chrestos or in its fuller form Jesus Christos, it was a name, *the* Name into which converts were baptized and by whose mystic power miracles were performed. It was a personal name, not of a Jewish prophet, but of a God who not long since had descended on earth like other deities, who like them had suffered and died, but by his own resurrection and by his continuing wonders had shown himself more powerful than his rivals " (p. 265). If this means anything, it means that the result of Professor Olmstead's effort to set Jesus in the light of history is to show that he is of no historical importance.

A few of many minor points may be noted. On p. 61 we are told to think of the Nazareth synagogue as a modest replica of the Capernaum synagogue of some two centuries later, where the use of the word " replica " is curious ; on p. 2 we are given the categorical, but highly improbable, statement that the Iashuia of the Tel-el-amarna letters is the historical Joshua[1] ; on p. 102 we find the questionable statement that Jesus was always on good terms with the Pharisees, and subsequently the account of the healing of the man born blind, though it comes from the supposedly very early Johannine Gospel, is edited to accord with this, and " the Pharisees " are turned into " Annas and Caiaphas " (p. 153), while the Pharisees are eliminated from the incident of Mark xii, 13 ff. and its parallels (pp. 213 f.).

H. H. Rowley.

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[1] On this, cf. now Albright, *BASOR* No. 89, Feb. 1943, p. 12n.

The Committee acknowledge with thanks the following :

American Journal of Archaeology, *XLVI*, 3 and 4.
American Journal of Philology, January, April, 1943.
Report of the United States National Museum, 1942.
The Royal Canadian Institute : Proceedings, 1941–2, *Transactions*, October, 1942.
The Antiquaries Journal, July–October, 1942.
Bulletin of the American Schools of Oriental Research, February, 1943.
The Biblical Archaeologist, December, 1942, February, 1943.
Expository Times, Vol. LIV, 1–9.
Harvard Theological Review, October, 1942, January, 1943.
Jewish Quarterly Review, *XXIII*, 2–4.
Journal of Near Eastern Studies, Vol. I, 4, Vol. II, 1.
Journal of the Royal Anthropological Institute, Vol. XXX, Part II.
Journal of the Royal Society of Antiquaries of Ireland, *LXXII*, IV and *LXXIII*, I.
Religions, January, April, 1943.
Scottish Geographical Magazine, December, 1942, April, 1943.
Annual of the British School at Athens, No. XL, 1939–40.

PALESTINE EXPLORATION FUND

ANNUAL REPORT

AND ACCOUNTS

WITH

LIST OF SUBSCRIPTIONS

FOR THE YEAR 1943

PALESTINE EXPLORATION FUND
2 HINDE STREET, MANCHESTER SQUARE, LONDON, W 1

THE PALESTINE EXPLORATION FUND

SOCIETY FOR THE ACCURATE AND SYSTEMATIC INVESTIGATION OF THE ARCHAEOLOGY, THE TOPOGRAPHY, THE GEOLOGY AND PHYSICAL GEOGRAPHY, THE MANNERS AND CUSTOMS OF THE HOLY LAND, FOR BIBLICAL ILLUSTRATION.

FOUNDED 1865.

PATRON—HIS MAJESTY THE KING.
PRESIDENT—HIS GRACE THE ARCHBISHOP OF CANTERBURY.
VICE-PRESIDENT—HIS GRACE THE ARCHBISHOP OF YORK.

The Society was established on the basis of the following rules :—

1. It was not to be a religious society. That is to say, it should be pledged not to advocate or attack any form of creed or doctrine.
2. It was not to adopt or to defend any side in controversial matters.
3. It was to be conducted on strictly scientific principles.

These rules have been jealously observed. The Society's organ, the PALESTINE EXPLORATION QUARTERLY, is open to all opinions, while it records as facts only the actual discoveries and results of its exploring officers. Although the Society is not a religious society, strictly so called, its work necessarily possesses unusual interest for Bible Students of all denominations, who find in the results obtained by exploration much that confirms and illustrates the historical truth of both the Old and New Testaments. In the course of its existence, the Society, with limited funds at its disposal, has done an immense amount of work, and published the results in books, papers, maps, plans and photographs, primarily for the benefit of its subscribers, and for the advantage of students of the Sacred Scriptures.

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MISS OLGA TUFNELL
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Auditors—MESSRS. TURQUAND, YOUNGS, MCAULIFFE AND CO., *Chartered Accountants*, 19 Coleman Street, London, E.C.2.

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Subscribers in the United States of America may remit to the National City Bank, 55 Wall Street, New York, with instruction to credit Messrs. Coutts & Co., or Palestine Exploration Fund.

PALESTINE EXPLORATION FUND

ANNUAL REPORT FOR THE YEAR 1943

THE finances of the Fund may be said to be in a fairly satisfactory condition, considering the difficulties necessarily caused by the war. The number of subscribers at home remains substantially the same as in the previous year; but there is a reduction in the subscriptions from Palestine. The signing by a number of subscribers of the deed of covenant which enables the Fund to recover income tax, at no cost to themselves beyond their ordinary subscription, provides a useful supplement to income from subscriptions. It is hoped that more members will adopt this method of helping the Fund by signing the covenant form which is obtainable from the office of the Fund. The upper floors of No. 2, Hinde Street have been let to a suitable tenant. Two Samaria volumes have been published and paid for; the cost was over £900, of which the Fund has contributed £450, the Samaria Joint Account £151, the British Academy and the British School of Archaeology in Jerusalem, each £150. There remains one more volume of this series to be issued and this will probably be done after the war. The Fund has already spent £67 on this account.

The P.E.F., Palestinian studies and all interested in the Holy Land have suffered a grievous loss in the death of Dr. E. W. G. Masterman, who died on 29th March, 1943, aged seventy-six. He had been connected with our Society for some fifty years and had for many years been our esteemed Honorary Secretary. In later years he had returned to the scene of his former labours in Palestine and in 1937 he resumed the duties of representative of the Fund in Palestine. He will be remembered, not only for his many contributions to our knowledge of that country and its inhabitants, but also for his skill as a doctor, whether in Jerusalem, Es-Salt, or at Camberwell, where he had been the Superintendent for many years. His colleagues on the Executive Committee of the Fund deeply regret his loss, a regret which is shared by all who know of his services to Palestine.

From 6th to 8th August, 1943, there was held a very successful Conference on the Future of Archaeology at the London University Institute of Archaeology. The Conference was largely due to the initiative of Miss Kathleen Kenyon, Acting Director of the Institute. Mr. J. W. Crowfoot represented the Fund at this gathering, which was also attended by Sir John Myres, Mr. O. G. S. Crawford, and others connected with the Fund. All speak highly of the way in which the Conference was organized and of the value of the exchange of ideas which resulted.

The Committee desire to thank the contributors of articles and reviews which have appeared in the *Palestine Exploration Quarterly* during 1943, especially Mrs. Crowfoot, Dr. D. Diringer, Mr. Theodore Gaster, Mrs. M. E. Kirk, Mr. Seton Lloyd, Professor Porteous, Mr. A. Reifenberg and Miss Olga Tufnell.

The Honorary Officers of the Fund have had some correspondence with the Paper Controller on the question of the amount of paper which is to be allowed for the *Quarterly*. The upshot may be looked upon as satisfactory; during the war period this journal will be issued twice a year, instead of once a quarter, the paper will be slightly lighter in weight, and the number of copies issued will be limited to what is reasonable. Subscribers may therefore confidently expect that, subject to the above limitations, the *Quarterly* will continue to appear under the able editorship of Professor Hooke.

Signed on behalf of the
Executive Committee,
18th February, 1944.

C. F. ARDEN-CLOSE, *Chairman.*
C. B. MORTLOCK, *Hon. Secretary.*

PALESTINE EXPLORATION FUND, 1943

BALANCE SHEET, 31st DECEMBER, 1943

LIABILITIES.

	£	s.	d.	£	s.	d.
CAPITAL :—						
Authorized—200 Shares of £1 each	200	0	0			
Issued—10 Shares of £1 each, not called					—	
SUNDRY CREDITORS for Current Expenses				27	19	5
SURPLUS OF ASSETS OVER LIABILITIES—						
(Excluding donated property) as per last Balance Sheet	2,516	10	1			
Add : Grant from British Academy in 1942 towards cost of printing *Samaria-Sebaste I*, now expended	150	0	0			
	2,666	10	1			
Less : Excess of Expenditure over Income for year	36	16	2			
				2,629	13	11
				£2,657	13	4

ASSETS.

	£	s.	d.	£	s.	d.
FREEHOLD PROPERTY—DONATED—No. 2 Hinde Street (estimated value £5,000)					—	
ALTERATIONS AND IMPROVEMENTS No 2 Hinde Street, as per last Balance Sheet				1,188	17	5
MUSEUM, LIBRARY AND STORE-ROOM, FIXTURES, FITTINGS, FURNITURE, etc., as per last Balance Sheet				382	2	7
JEWISH COLONIAL TRUST—DONATED—50 Ordinary Shares of £1 each, fully paid					—	
STOCK OF PUBLICATIONS, MAPS, BOOKS, MODELS, LANTERN SLIDES, LIBRARY, ANTIQUES, etc.					—	
SUNDRY DEBTORS				40	17	6
SUBSCRIPTIONS IN ARREAR				30	10	0
£700 3-per cent. Defence Bonds				700	0	0
£50 3-per cent. Savings Bonds, 1955-65 P.O. Issue				50	0	0
CASH AT BANK*	£212	10	5			
CASH IN HAND	52	15	5			
				265	5	10
				£2,657	13	4

* *Note.* Includes £25 donated in 1939, and not yet expended, for the purchase of Committee Table in memory of the late H. Coote Lake, Esq.

C. F. ARDEN-CLOSE, *Chairman.*
A. M. HYAMSON, *Hon. Treasurer.*

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31st DECEMBER, 1943

RECEIPTS.	£	s.	d.	£	s.	d.
To Balance 31st December, 1942				345	17	8
,, Subscriptions and Donations, including Local Societies				384	15	9
,, Sale of Publications				25	1	5
,, Rent				316	11	8
,, Dividend on £700—3 per cent. Defence Bonds to 17th June	21	0	0			
,, Dividend on £50 3-per cent. Savings Bonds	1	10	0			
				22	10	0
,, Grant from the British School of Archaeology in Jerusalem towards cost of printing *Samaria-Sebaste I*				150	0	0
,, Refund of Income Tax on Covenanted Subscriptions				66	1	4
				£1,310	17	10

	£	s.	d.
Receipts for year, as shown above, including grant of £150 from British School of Archaeology in Jerusalem towards cost of printing *Samaria-Sebaste I*	965	0	2
Less : Arrears of last year's subscriptions, etc., received during 1942	25	5	0
	939	15	2
Add : Arrears and Debtors at 31st December, 1943, as shown by Balance Sheet	71	7	6
	1,011	2	8
Excess of Expenditure over Income	36	16	2
	1,047	18	10

PAYMENTS.	£	s.	d.	£	s.	d.
By Printing, including Quarterly, Annual Report, Postages and Despatch				178	18	1
,, Editor's fee				50	0	0
,, *Samaria-Sebaste I*				386	17	11
,, *Samaria-Sebaste III* Blocks				14	16	7
,, Repairs				69	5	2
,, Salaries and Wages (including National Insurance)				253	12	2
,, Postages and Telephone				15	18	2
,, Fire Insurance				4	8	0
,, Water Rate, etc.				18	11	10
,, Lighting and Heating				5	15	10
,, Stationery and Sundries				3	7	2
,, Audit Fee				5	5	0
Expenses arising directly out of the state of war :						
War Damage Insurances	20	1	1			
Fire Guard Group Contribution	18	15	0			
				38	16	1
				£1,045	12	0
Balance at 31st December, 1943 :						
At Bank	212	10	5			
In hand	52	15	5			
				265	5	10
				£1,310	17	10

	£	s.	d.
Payments for year, as shown above	1,045	12	0
Less : Creditors at 31st December, 1942, paid during 1943	25	12	7
	1,019	19	5
Add : Creditors at 31st December, 1943, as shown by Balance Sheet	27	19	5
	£1,047	18	10

AUDITOR'S REPORT TO THE MEMBERS OF THE PALESTINE EXPLORATION FUND.

We report that we have obtained all the information and explanations we have required as Auditors. We have examined and compared the above Balance Sheet and the Receipts and Payments Account with the books and vouchers of the Fund, and, in our opinion, they are properly drawn up so as to exhibit a true and correct view of the state of the affairs of the Fund, according to the best of our information and the explanations given to us and as shewn by the books of the Fund.

19 COLEMAN STREET,
LONDON, E.C.2.
27 *April*, 1944.

TURQUAND, YOUNGS, MCAULIFFE & CO.
Chartered Accountants.

LIST OF SUBSCRIPTIONS AND DONATIONS

RECEIVED BETWEEN 1st JANUARY AND 31st DECEMBER, 1943, INCLUSIVE

* Asterisks denote covenanted subscriptions

If any omission or mistake be observed in the following lists, the Secretary will be very glad to be informed of it, and will rectify the error in the next Annual Report.

	£	s.	d.
Adler, E. N., Esq.	0	10	6
*Alford, Miss M.	1	4	6
*Arden-Close, Sir Charles	2	2	0
Armitage, Robert, Esq.	2	2	0
Ashmole, Prof. B.	1	1	0
*Barham, S. P., Esq.	1	1	0
*Barnett, Mrs. H. A. Lake	2	2	0
*Barnett, R. D., Esq.	1	1	0
Barron, Mrs.	1	1	0
Bate, Miss D. M.	1	1	0
*Bayley, Arthur R., Esq.	2	2	0
Beasley, W., Esq.	4	4	0
Becke, Major A. F.	1	1	0
Belmore, The Earl of	1	1	0
*Bentwich, Prof. N.	1	1	0
*Birnbaum, Dr. S.	1	1	0
Blair, Dr. D. P.	1	1	0
Blyth, Miss Estelle	1	1	0
*Boulton, W. H., Esq.	1	1	0
Bramwell, W., Esq.	1	1	0
Bristow, Ernest, Esq.	1	1	0
Brown, James, Esq.	2	2	0
*Bushell, W. F., Esq.	1	1	0
Buxton, Dr. P. A.	1	1	0
*Caiger, Rev. S.	1	1	0
*Cairns, Rev. Dr. W. T.	0	10	6
Canton, V., Esq.	1	1	0
*Carter, John, Esq.	2	2	0
Catterson, S. M., Esq.	2	2	0
*Caullie, Lt.-Col. A. G.	1	1	0
Cerny, Rev. E. A.	1	1	0
Chalmers-Hunt, D. R., Esq.	1	1	0
*Clarke, Col. N. P.	1	1	0
*Crace, Mrs.	2	2	0
Crawford, L., Esq.	1	1	0
Crawford, O. G. S., Esq.	1	1	0
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Allegheny College	1	11	6
Alleyns School	1	11	6
Alma College	2	2	0
American Philosophical Society	1	1	0
American University Beirut	1	1	0
Amherst College	1	1	0
Armagh Library	1	1	0
Ashland College	1	1	0
Ashmolean Museum	1	1	0
Bangor Theol. Seminary	1	0	0
Berkeley Bap. Div. School	1	1	0
Birmingham Public Libraries	1	1	0
Boston Public Library	1	1	0
Bristol Libraries	1	1	0
British Columbia, Union College of	1	1	0
Brooklyn Inst. of Arts and Sciences	1	1	0
Brown University	1	1	0
Bucknell Library	2	2	0
Butler University	4	4	0
California University	0	10	6
Cambridge Museum of Archaeology and Ethnology	5	0	0
Carried forward	£165	6	0

	£	s.	d.
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Cone Memorial Y.M.C.A.	3	6	4
Congregational Library, Boston	2	2	0
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Davidson College	1	1	0
Duke University	1	1	0
Durham University	2	2	0
Eastern Baptist Theol. Seminary	2	12	6
Emmanuel Missionary College	1	1	0
Harvard College	1	1	0
Haverford College	1	1	0
Illinois University	1	1	0
Istanbul University	1	1	0
Jewish Institute of Religion	1	1	0
Jewish Theol. Seminary	1	1	0
Jews College	0	10	6
John Rylands Library	1	1	0
Leeds Library	1	1	0
Leeds University	1	1	0
London University	1	1	0
Los Angeles Public Library	1	1	0
McMaster University sity	1	1	0
Manchester Coll., Oxford	2	2	0
Manchester University	1	1	0
Mansfield Coll., Oxon.	1	1	0
Mary Baldwin College	1	1	0
Metropolitan Museum of Art	1	1	0
Moody Bible Institute	3	2	3
Mount Hoylake College	1	1	0
Newcastle-upon-Tyne Library	4	4	0
New College, London	1	1	0
New York Public Library	1	1	0
Newbery Library	1	1	0
Northwestern University	1	1	0
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Oberlin College	1	1	0
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Carried forward	£232	9	11

	£	s.	d.
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Peabody Institute ..	1	1	0
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St. Deniol's Library	1	10	0
St. Louis Public Library	1	1	0
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Selly Oak Colleges ..	2	2	0
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Smith College Library	3	7	8
So. African Public Library	1	1	0
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